

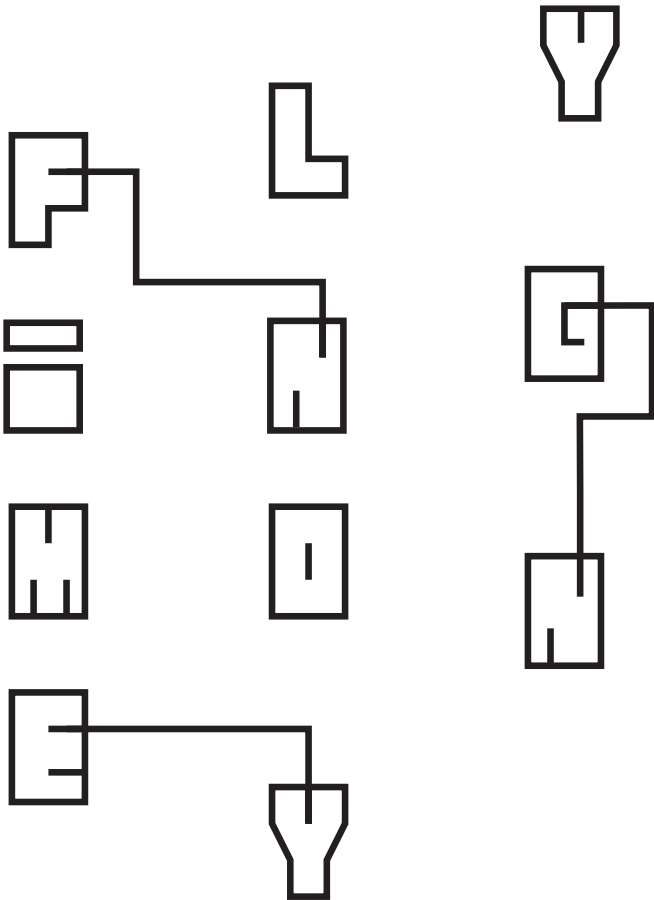
FLYING MONEY

2018

INVESTIGATING ILLICIT FINANCIAL FLOWS IN THE CITY

EDITORS

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Dear reader,

A free city is a city with no corruption. There is a growing realisation that global cities, such as Amsterdam, occupy key positions in the world economy and thus also offer opportunities for subversive activities. The initial enthusiasm for new forms of enterprise, technological innovations, international money flows and economic prosperity has made way for questions and concerns about what this means for the life and the residents of this city. Just how free of subversive activities is the city?

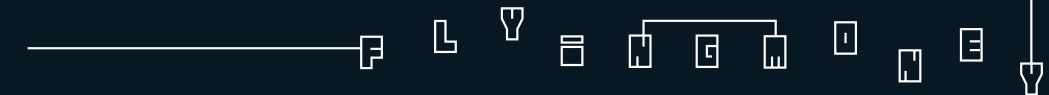
On 22 and 23 May 2018, the Flying Money conference, an initiative of the City of Amsterdam took place in the Rode Hoed in Amsterdam. The theme of this conference was illicit financial flows, in other words money flows not allowed by law or disapproved by society, such as money laundering and certain forms of capital flight. This publication contains the results of the conference, along with relevant academic and other articles ensuing from the conference, which was organised in collaboration with the Institute of Network Cultures from the Amsterdam University of Applied Sciences. This collaboration was illustrative of the entire conference, which was a cross-fertilisation of different worlds. The world of digital money and subversive activities, but also that of anti-authoritarian independent thinkers and the more conventional official world. From free-market adepts to proponents of stringent governmental interventions, and everything in between.

All these worlds come together in this publication, with additional background articles by various experts. The fact that so many people were prepared to contribute to this publication is invaluable, and I would like to thank everyone for their input. It shows that the issue of dubious financial dealings is very relevant and it does justice to the real concerns of society regarding this issue.

The articles also show how diverse and complicated the problems surrounding illicit financial flows are, as well as suggesting possible solutions. Awareness, debate, new forms of collaboration and creative solutions are required. So I would like to warmly invite everyone to join us in constructive thinking during the series of debates for Flying Money 2019.



Femke Halsema
Mayor of Amsterdam



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The editorial team would like to thank all of the speakers and participants for their contributions. We can now reflect on a successful conference where new connections, ideas and networks were born, and a call for joint action to keep our society safe was clearly made. From talking together to walking together, new windows of opportunity have emerged.

INDEX

Femke Halsema (mayor of Amsterdam) Foreword	3
---	---

INTRODUCTION

Caroline Nevejan and Ilse Verkerk Introduction 'Flying Money: undermining dynamics in the city of Amsterdam'	10
--	----

CONFERENCE REPORT 22

-Day 1-	23
Jozias van Aartsen Geleyn Meijer	

Future of money	26
Klaas Knot Adjiedj Bakas Kei Kreitler Saskia Sassen	

Who owns the city	27
Joris Luijendijk Jan Willem Bastijn TINKEBELL Caroline Nevejan Paneldiscussion	

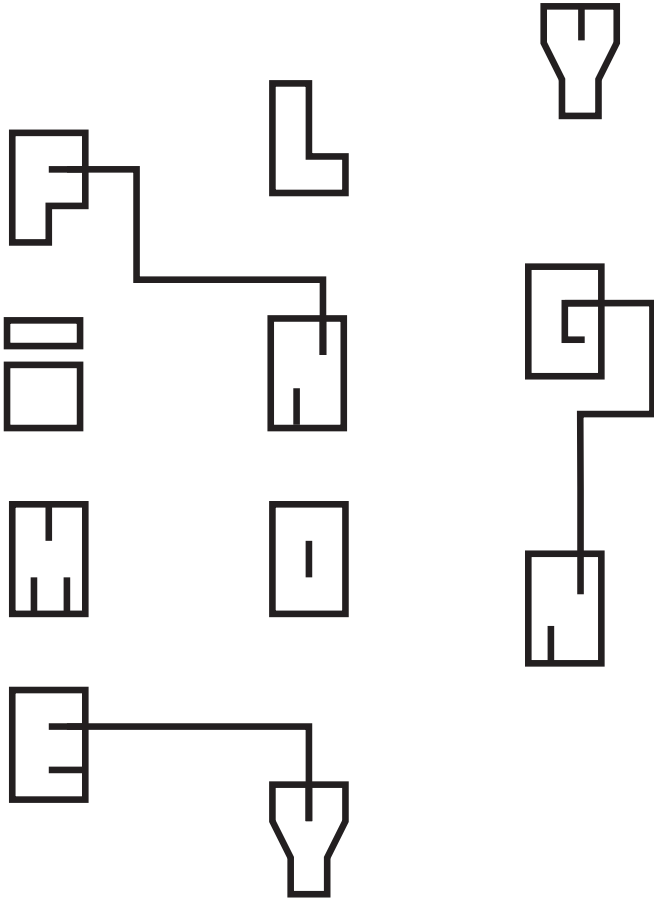
Meaning of crypto in the city	30
Marloes Pomp Mariana Gomez de la Villa Jaromil Stefan Heidenreich Paneldiscussion	



Parallel money structures in the city	34
Edgar Kampers	
Greetje Bos	
Nikos Passas	
Annemie de Boye	
-Day 2-	38
William Browder	
The Magnitsky Act	
Investigating illicit financial flows	39
Misha Glenny	
Tom Engers	
Rob Procter and Andrew Elliot	
Femke Herregraven	
Rob van't Oever	
Jonathan Brown	
Bastian Obermayer	
Anita van Dis	
Eric Smit	
Paneldiscussion van Dis and Smit	
Regulating urban finance	47
Gian Guido Nobili	
Giulia Baruzzo	
Karin Wilschut	
Jonas Hult	
Stefanie Vermeul and Loes van der Wees	
The future of governance	50
John Christensen	
Reinier Pollmann	
Hennie Verbeek	
WORKSHOP WEDNESDAY MAY 23RD	53
BITCOIN ATMS: A STUDY ON THE VULNERABILITY OF	
CRIMINAL EXPLOITATION	

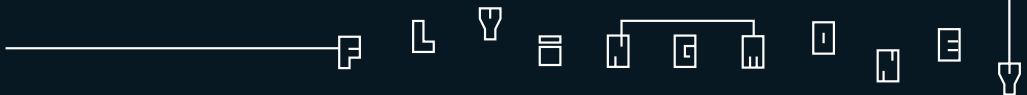
BACKGROUND ARTICLES

Geert Lovink Flying Money: Organized Crime and the New Digital Money <i>The role of local authorities in tackling illicit financial flows in a dynamic financial environment</i>	58
Pieter Tops and Jan Tromp The Shady Side of Dutch Finance <i>Undermining or 'subversive' crime in the Netherlands</i>	62
Nikos Passas Cash, Crime, and Common Sense <i>Effective (and non-effective) ways of tackling illicit financial flows</i>	70
Meike Willebrands True Crime: Major Anti-Money Laundering Operation <i>Local answer to illicit financial flows through Money Transfer Offices (Rotterdam)</i>	85
Judith Hart The City of Amsterdam as Property Owner <i>Local answer to illicit financial flows through real estate (Amsterdam)</i>	88
Saskia Sassen Predatory Formations Dressed in Wall Street Suits and Algorithmic Math 24 <i>High finance in daily lives</i>	94
Letizia Chiappini The Collective Turn in Finance: On Commonfare and Social Wallet <i>(Local) answers to global economy</i>	109
Max Dovey Improvising Blockchains <i>An overview and analysis of performance methods used to explore emerging decentralized ledger technologies in the Arts</i>	115
Leila Ueberschlag Complementary Currencies <i>Key systems for better and fairer economic cooperation</i>	123
Stefan Heidenreich and Geert Lovink Imagine There's No Money <i>A mind experiment</i>	130



INTRODUCTION

FLYING MONEY: UNDERMINING DYNAMICS IN THE CITY OF AMSTERDAM



INTRODUCTION

FLYING MONEY: UNDERMINING DYNAMICS IN THE CITY OF AMSTERDAM

Caroline Nevejan & Ilse Verkerk

Amsterdam has a vibrant economic climate in which international businesses like to use the city as a base. Even though the international banking world seems to have overcome the financial crisis of 2008, there is still a lot of uncertainty as to how the banking world will survive. Nevertheless, the international economy is thriving and Amsterdam is one of its centres that contributes every day. Being a hub and a hotspot for many people from all over the world, also other new dynamics have entered the city in the last few years. Millions of euro's pass through the city of which we do not know anymore whose money it is, where it comes from or where it goes. Also, the developing cryptocurrencies and parallel money cultures all contribute to the opaqueness of the future of the financial world.

To better understand the current dynamics that will affect our financial future, Amsterdam has taken the initiative to organize an international conference with and for European cities: Flying Money – Investigating illicit financial flows in the city. Below first a description is given of the challenges a North European city like Amsterdam is facing today. Secondly the potential of recognizing and designing urban dynamics, which informed the design of the conference and the line-up of speakers, is sketched. In the last section results of the Flying Money conference are shared and a short description of the book is offered.

Breaking social cohesion

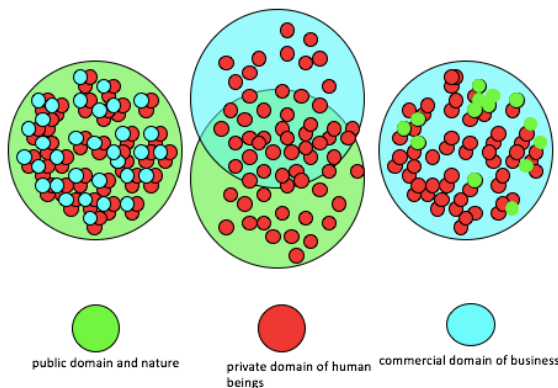
When being confronted with large sums of money passing through its city which are not tracked nor traced, a municipality needs to pay attention to such a new dynamic. Municipalities are dependent on tax-paying residents for making roads, schools and more. Without any insight and control over such new money flows, the municipality loses ground and criminal networks easily take over. To understand such undermining dynamics, it is possible to analyse the different dynamics that constitute the city as a complex system. Looking at the city in this way triggers specific perspectives on developments in the city [1]. Complex systems are not designed in one go, they emerge, and interventions often do not have anticipated effects.

Cities are places where many people live together. They are territories where people breath, love, laugh, pray and fight. Digital networks cover these territories with lots of 'data hunter-gatherer' activities. Different realities – social, physical, technological and ecological – all merge in the personal experiences of people in the city. In these merging realities people navigate and coordinate their own trajectories for finding food, schools, work, shops, doctors and sports clubs, for example. Different social networks and platforms allow for new relationships in private and professional spheres. Relations between producers and

¹ M. Batty, 'Cities as Complex Systems: Scaling, Interaction, Networks, Dynamics and Urban Morphologies', in Robert A. Meyers (ed.), *The Encyclopedia of Complexity & System Science*, Berlin: Springer 2009.

consumers change as result of this [2]. All these local acts of coordination put together constitute the city as a complex system in which social structures, information and communication technologies, infrastructures and ecologies are deeply interwoven and merge in the personal experience of people in the city [3]. In the midst of the many new practices and potentials of digital technologies, their undermining dynamics now surface in different cities around the world.

Worldwide commercialization of the shared public domain



Whereas centuries ago the natural environment was the context for human life, these days the commercial environment has taken over that role. More than half of the world's population lives in cities; the context of policymaking for day-to-day life has shifted from craftsmanship and nature to technological culture and commercial business. Even though we may still feel like nature is just outside the city, the reality is that all land is monitored and monetized. Financial systems create value while soil for example, which is vital to sustaining life, seems to have no value at all [4]. With the rise of digital technologies, economies are changing and the financial world has been going through fast transitions [5]. Industries disappear, new services are developed. Today, fast-moving bits and bytes represent transactions of billions of dollars and euros in different currencies around the world. The financialization of cities and neighbourhoods occurs at a very fast pace and processes of gentrification drive original residents out of their homes in cities too often [6]. In Amsterdam in 2018 an elementary school teacher or a local policeman cannot afford market rents. Due to massive price and rental increases the small entrepreneur can no longer afford to stay in the city.

2 S. A. Rezaee, M. Oey, C. Nevejan, & F. Brazier, 'Participatory Demand-Supply Systems', *Procedia Computer Science*, 44 (2015), pp. 105-114.

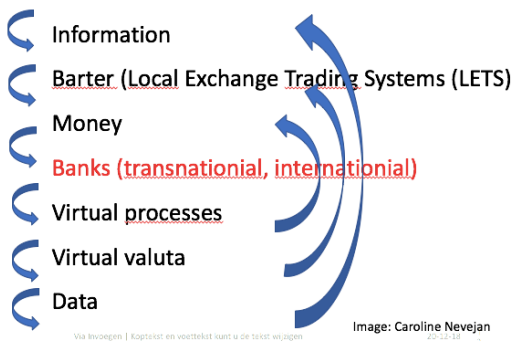
3 F. Brazier, & C. Nevejan, 'Vision for Participatory Systems Design', in *4th International Engineering Systems Symposium (CESUN 2014)*.

4 D. Solomon, & C. Nevejan, 'Soil in the City: The Social Environmental Substrate', in A. Toland, J. Stratton Noller, & G. Wessolek (eds), *Field to Palette: Dialogues on Soil and Art in the Anthropocene*, London: CRC Press, Taylor & Francis Group, 2018, pp. 591-608.

5 M. Castells, *The Rise of the Network Society* (Vol. 12), Hoboken, NJ: John Wiley & Sons, 2011.

6 C. Boano, & J. Rokem, 'Introduction: Towards Contested Urban Geopolitics on a Global Scale', in J. Rokem & C. Boano, *Urban Geopolitics*, London: Routledge, 2017, pp. 1-13.

Money is trust in networks



Even personal communication environments have been commercialized. Preferences and activities are tracked and traced to generate profit [7]. People have become marketing products in global social networks that are driven by shareholder profit. In all these transactions, it can be observed that data is the default constitution of financial and money cultures today [8]. Cryptocurrencies, social networks, local exchange trading systems, Hawalla banking and artificial intelligence all contribute to a situation where few people have an insight on what will happen next in the finance of cities around the world. Even though we can hardly perceive it, this change in money flows that happens as result of the emerging neoliberal global network society has a profound impact on the dynamics of the complex system that a city constitutes.

A free city is a city with integrity. Obviously, we are glad investments are made in the city. That is a necessary condition for a city to survive. But not all money is welcome; ‘merits’ from human- and drug trafficking or fraud are, of course, not wanted. But how do we know what the origin of money is? Questions such as “who owns the city?” are rising in the field of real estate, catering and hotels. Amsterdam is a global financial city, popular among national and international investors, but do we understand the origin of these funds and if so, are these the right partners for the city?

Financial undermining dynamics

The combination of different opaque dynamics raises the fundamental question by whom a city is actually owned. Fifteen years ago, Stanford professor Lawrence Lessig analysed that the sharing economy easily constitutes two thirds of an urban economy [9]. The exchange of goods and services for which no financial transactions are required, such as raising children, cooking a dinner or cleaning the street, are part of the sharing economy. From this perspective ‘the people’ constitute the city. However, with the commercialization of private lives – through lots of data harvesting in cities – the financial economy is invading the sharing economy

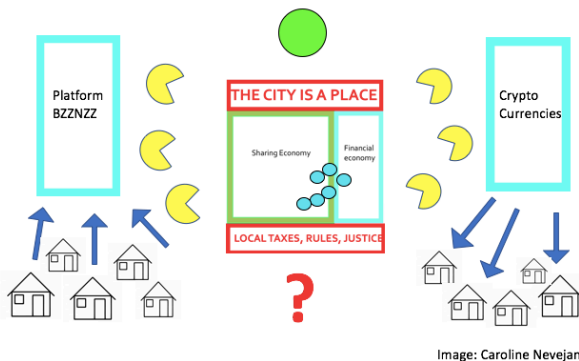
7 J. F. Zuiderveen Borgesius, ‘Improving Privacy Protection in the Area of Behavioural Targeting’, Diss. Amsterdam: University of Amsterdam, 2014.

8 G. Lovink, N. Tkacz, and P. de Vries (eds), *MoneyLab Reader: An Intervention in Digital Economy*, Amsterdam: Institute of Network Cultures, 2015.

9 L. Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York, NY: Vintage Books, 2002.

profoundly. As a result, ‘my private data are now used by others to manipulate me’ [10]. Secondly, this financial economy, the remaining one third of our economy, is a global economy that is driven by ‘global gambling systems’ like the London stock exchange [11] which deeply undermine the public domain. In the early 21st century the city is increasingly owned by global companies which have no interest in the quality of life for its residents.

Who Owns the City?



Problems around money, corruption and fraud are of all times, but the manifestations and consequences of crime, fraud and corruption are different, and of larger size. The world economy is so closely intertwined that the falling of one bank already can lead to a global financial crisis. In the globalized world money flies around the globe in one day; from Spain to the Cayman Islands and on to Amsterdam. There are digital forms of money with own customs and mores. Banks seem to lose their monopoly position in favor of ‘fintech’ [12]. All these changes affect the playing field and the modus operandi of the criminals.

The effect of these changes also affect the viability of the city and its inhabitants. They see their neighborhoods change; a homogeneous selection of shops and companies and perceptions about the activity in certain neighborhoods/streets seem to indicate the existence of a ‘parallel-economy’. Hard working entrepreneurs are faced with competitors who can survive without any effort. Young people grow up with ‘role models’ who have never have worked for one day, but seem to make big bucks and who are sponsoring their sports club. A range of intermediaries offers its services and also benefit, consciously or unconsciously. Most alarming is the fact that many cities hardly have an idea about the financial dynamics that happen inside their territories. Financial global networks (criminal or not) seek security by investing in ‘stones’ like apartment buildings, office buildings, data centres, hotels, social housing projects and they preferably don’t engage with the neighbourhoods in which ‘their stones’ are placed. As a result, neighbourhoods are faced with empty houses and rising prices.

10 H. de Bruijn, ‘We Worden Allemaal Gemanipuleerd Met Onze Eigen Data’, *Trouw*, Persgroep Nederland, 18 April 2018.

11 J. Luyendijk, *Swimming With Sharks: My Journey Into the World of the Bankers*, London: Guardian Faber, 2016.

12 ‘Fintech’ is shorthand for financial technologies, which are rapidly developing new products and services for the financial world.



In the 80s in Amsterdam there was a strong squatter movement to counter these practices of speculation. With the social democratic government at the time social housing policies were fuelled with new energy and innovation [13]. The paper trail of these speculative financial transactions was hard to expose at the time. Today's digital networks have the potential to allow for more transparency than ever yet little happens in this respect. ICT in the current financial world helps to veil transactions in the first place. Financial players resist as much as possible to contribute taxes to the cities that host them. For criminal networks, such uncertainties are rewarding. No court order can compete with the scale and speed of financial transactions. It can take up to two years to follow up one morning of international transactions. As a result, criminal networks profit from this imposition. Money laundering becomes an effortless practice and, as a powerful dynamic, undermines the public domain that characterizes cities.

Undermining Data Dynamics

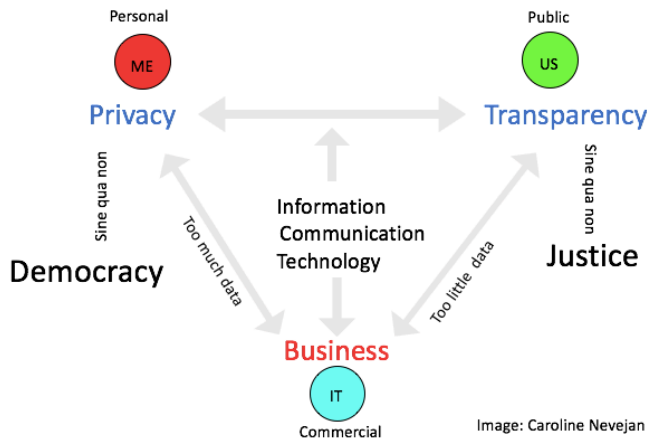


Image: Caroline Nevejan

The public domain is the foundation of the city. It is the place we share, which includes all people. It is where shared culture emerges [14] and where the market is organized. The public domain represents the idea of justice [15]. So far, Dutch and European policymaking has hardly been able to affect the wild and exponential growth of an ICT industry that is undermining the public domain, its democracy and justice as we know it.

For democracy, the existence of privacy is crucial [16]. Democracy is based on nurturing difference of opinion and therefore one needs privacy to explore, hesitate and interact. The digital era is eating privacy. Google, Amazon, Facebook and others, do not share data or source code, yet they harvest personal details of billions of people on a daily basis. And, as is

13 H. Pruijt, 'The Impact of Citizens' Protest on City Planning in Amsterdam', in L. Deben, W. Salet and M.-T. van Thoor (eds), *Cultural heritage and the future of the historic inner city of Amsterdam*, Amsterdam: Aksant, 2004, pp. 228-244.

14 O. Negt, A. Kluge, & P. Labanyi, "'The Public Sphere and Experience': Selections", *October* 46 (Autumn 1988), pp. 60-82.

15 Sen, A.K., 2009. *The idea of justice*. Harvard University Press.

16 M. Blaauw, 'The Epistemic Account of Privacy', *Episteme* 10.2 (2013), pp.167-177.

proven by the case of Cambridge Analytica in 2018, they do engage in politics. For justice to function, transparency is key [17]. Transparency can have many forms as long as clarity of what is happening is offered. This is not happening today. In this era in the beginning of the 21st century there is no societal transparency of server architectures, algorithms, data ownership and manipulation. Minimal standards for data protection are only now being formulated in different countries. With these new technologies, the market explores and takes whatever it can get. Legislation and societal policymaking comes years, even decades, later.

Recognizing and designing urban dynamics

While ICT can be exploited for private gain, it also has great potential to support social democracy provided its architectures, algorithms and data management are designed in specific ways. The Amsterdam municipality is determined to confront the detrimental dynamics and nurture the potential of the digital technologies for the city and its people. Embracing the notion of smart, liveable cities and re-designing its information architectures, the municipality explores how the 'good digital government' can function. This requires the inclusion of diverse kinds of people, it requires many pilots to be carried out, it requires rigorous monitoring of what happens as result of these interventions and new methods of implementation. New networks for the sharing of information between cities can help and possibly even lead to engaging in action together. In a 21st century city the digital domain has entered all sectors of health, education, work and unemployment, traffic, food, finance and more. Knowing how to apply digital processes well, and to recognize and counteract undermining practices, requires new roles, regulations and governance principles in municipalities.

Design is core to city futures

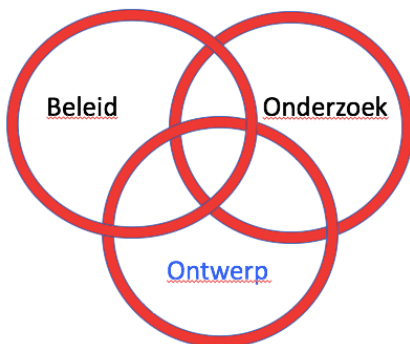


Image: Caroline Nevejan

In the last few years Amsterdam has developed several instruments for fighting serious crime. There are a number of ways in which the city can itself crack down on crime and non-transparent investments. We can screen parties under the 'Bibob Act' [18] or, in Amsterdam, by

17 F. Brazier, A. Oskamp, C. Prins, M. Schellekens, & N. Wijngaards, 'Law-Abiding and Integrity on the Internet: A Case for Agents', *Artificial Intelligence and Law*, 12.1-2 (2004), pp. 5-37; D. Broeders, E. Schrijvers, & E. Hirsch Ballin, *Big Data and Security Policies: Serving Security, Protecting Freedom*, WRR-Policy Brief no. 6, The Hague: WRR, 2017.

18 The Bibob is an abbreviation for the Public Administration (Probity Screening) Act (Bevoording Integriteit Beoordelingen Openbaar Bestuur).



applying the BIO^[19]-regulations. However, Bibob screenings may only be carried out if a permit or subsidy is required or if the authorities themselves are party to the sale or ground lease. Where two private parties are concerned, the BIO regulations seem to offer a good alternative. ^[20] They give the municipality right of first refusal and enable it to carry out an integrity screening of the purchasing party. This is a way of controlling the real estate in a particular area. However, often international companies blur identities, create opaque constructions and Dutch law becomes powerless.

Municipalities need to consciously design the local impact of global business on their cities. In order to safeguard the public domain, they need to create new alliances for safeguarding the civic nature of our cities. Cities will need to demand of any business or organization that they engage with in the local near future. Because cities are complex systems the overall design emerges out of the interaction of the different dynamics of which many are also unseen. However, the design of the city as a complex system can be informed by the values it aims to embrace ^[21]. Besides technological change, from this perspective fighting illicit financial flows is also, or perhaps especially, achieved by cultural change. There is a cosmopolitan elite that is internationally oriented, in such way that they do not feel rooted in a particular city or even a country, anymore. As a consequence, avoiding taxes or rules, is not thought to be immoral. In addition, the Anglo-Saxon business culture (the leading culture in many European countries including the Netherlands) with its focus on profit maximization of the shareholders, seems to contribute to this phenomenon. Values such as sustainability, care for staff and care for the surroundings seem less important than profit.

Value sensitive design is a new discipline in its own right which has acquired momentum because so many systems in our world are beyond comprehension for most of us today. Values, however, we can understand and nurture. Values are very visible in the cultures we share ^[22]. They reflect what we care about, what we consider beneficial or detrimental to our daily lives ^[23]. For example, it is necessary to design systems that support human beings to breathe since without breath no human life can exist. Likewise, we need to design systems (including social structures) that allow for children to eat well and move enough so they do not develop obesity. Complex values like organizing solidarity between generations, can be a value that is incorporated as a dynamic in an urban complex system. Counteracting the current undermining forces in financial systems in European cities needs this cultural value-based approach. In such an approach values are the starting point for policymaking, its social structures and technological system designs. Diverse groups of cities residents can engage with these processes. Scientists can work with the municipality, but also unusual collaborations with journalists, artists and designers can contribute to constitute a safe and

19 The BIO is an abbreviation for the Integrity and Agreements Provision, a policy regulation of the municipality of Amsterdam.

20 Still the local government has to be one of the parties. The so-called "Van Traa" regulations provide that the local government has to give permission before a real estate transaction can be made between two private parties in specific strategic real estate cases.

21 J. Van den Hoven, 'Value Sensitive Design and Responsible Innovation', in R. Owen, J. Bessant, & M. Heintz, *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society*, Hoboken, NJ: John Wiley & Sons, 2013, pp. 75-83.

22 C. Nevejan, 'Presence and the Design of Trust', PhD diss. Amsterdam: University of Amsterdam, 2007; C. I. M. Nevejan, *Witnessing You: On Trust and Truth in a Networked World*. Delft: Participatory Systems Initiative, Delft University of Technology, 2012.

23 C. Nevejan, & F. Brazier, 'Design for the Value of Presence', in J. van den Hoven, P. E. Vermaas, & I. van de Poel, *Handbook of Ethics, Values, and Technological Design: Sources, Theory, Values and Application Domains*, Dordrecht: Springer, 2017, pp. 1-23.

inspiring public domain which serves all people, rich and poor.

For a cultural value based approach to be effective, this needs to be matched with formal and judicial measures. The difference in scale and speed of information between informal networks and formal institutions puts local governments in a very weak position, while effects of criminal networks can be felt in every street. Many intermediaries that are vital for the functioning of these undermining forces, are part of urban professional networks that enjoy the city's infrastructure. Yet they do not support this infrastructure and accept a culture in which undermining forces are successful.

Cultures change because new awareness emerges, which is why the debate about integrity and undermining forces needs to be public and accessible and pervasively present in many places. Cultures also change when governments put new measures in place. Democratic governments have limited and formalized means, which are built upon laws that assume that ultimately with these laws the public domain can be safeguarded. However, scale and speed of technology are out-processing the effect of these laws. Criminal networks are fast and smart and easily outperform institutional investigations, so it seems. Recognizing what is happening and being able to act upon this, requires new insight and new methods. Therefore, to better understand the current fast changing financial urban undermining dynamics and to learn from certain best practices that have been identified, the municipality of Amsterdam decided to organize the Flying Money conference with and for fellow European cities for a start.

Grounding Flying Money: what can cities do?

In the conference a wide array of speakers coming from different formal and informal societal realms engaged with the question how illicit financial flows in a city can be identified and eradicated. An extensive conference report follows this introduction in which a summary of every speaker is given. After you will find articles by different speakers in which they describe in depth their perspectives. We intentionally offer such a detailed report because the insight and practice that has been gathered was diverse and profound yet the synthesis will only emerge in the years to come.

Unraveling the blurring of financial flows

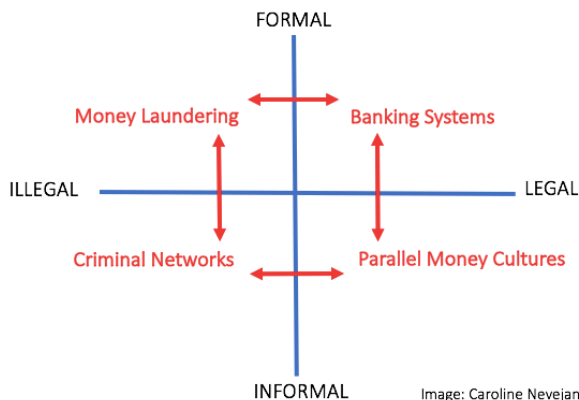


Image: Caroline Nevejan



As result several things were realized:

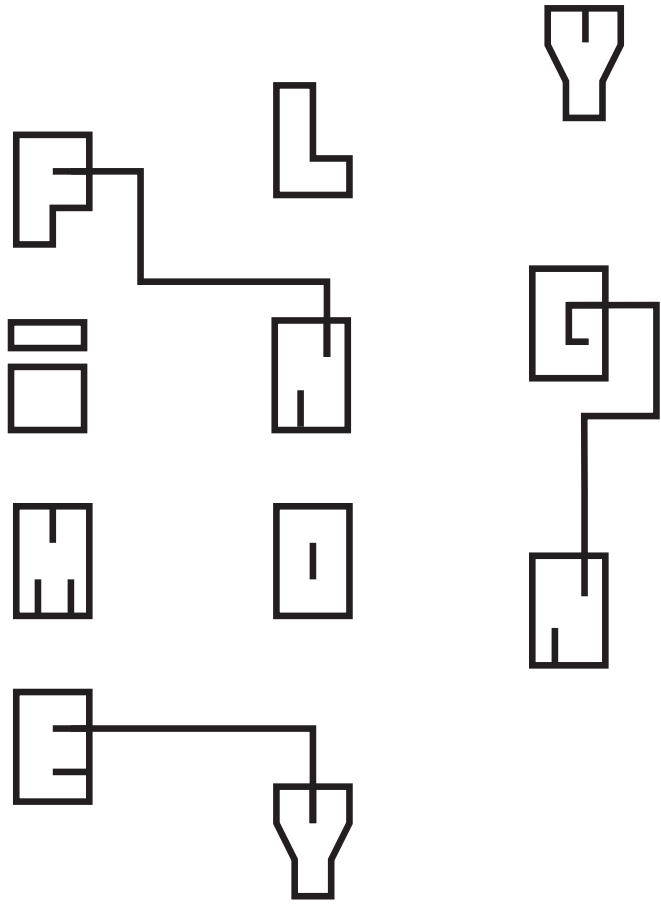
- Undermining thrives by the blurring of formal and informal cultures and by integrating legal and illegal activities. This requires new methods that address both formal and informal cultures.
- International collaboration needs to take into account that different cities in different countries have different ways of blurring formal and informal, legal and illegal practices.
- The various forms and orders of magnitude of undermining practices vary so much, that it is impossible to point out one successful approach for recognizing and acting upon illicit flows.
- For being able to recognize and understand what is happening, municipalities need to engage with unanticipated new allies such as investigative journalists, professionals in the financial world, ethical hackers, data scientists- and journalists, NGO's and civic initiatives.
- It is of vital importance that different departments within a municipality collaborate and share information in new ways. New processes for information sharing and acting together need to be designed.
- New approaches ask for nuance: what is liveable for one person, is completely the opposite for the other. Any approach that aims to fight illicit financial flows, needs to protect at the same time the bona fide entrepreneur and integer citizen who are vital for the prosperity and well-being of Amsterdam.
- For developing new approaches theory and analyses need to deconstruct undermining practices into different elements which can each have their own measure and within the potential and limitations of the Dutch and European Law of course.

When looking at the blurring between formal and informal cultures and between legal and illegal practices, the landscape for municipalities in which they have to operate is indeed very international. Yet effects of this landscape are extremely local. At the conference the tension and the relation between local and international organisation became very tangible. Different areas where new research needs to be developed were identified. The financialization of our economy has severe impact on public life, business life, personal lives, and more. Financialization creates new relations between cause and effect and offers new challenged for municipalities to understand and control. Also, financialization helps to blur the boundaries between the different practices and legal frameworks. Secondly, data gathering offers new opportunities for identifying undermining practices. In local and in international context these opportunities need to be studied and developed. Even though it appears that every city and nation has its own data gathering protocols, new research needs to study how synergy between the diverse identities and approaches can be obtained. Thirdly, the possible space for action of a city is limited by national and international laws and trade agreements. Nevertheless, the call for local action for countering local effects of undermining practices is wide spread. Research needs to study how local impact of global developments can become a factor of design instead of a factor of surrender and victimization.

Last but not least: we have to be realistic to what account we can stop illicit financial flows. Fraud, corruption and other criminal behaviour occurred in all times and the disappearance of one phenomenon leads to the occurrence of another. Mankind is adaptive. Fighting this phenomenon asks for persuasion, intrinsic motivation and perseverance. Faced with global crime taking over many cities in the world, the fight for our freedom, for our integrity, for a safe everyday life, is at the heart of urban futures around the world.

Bibliography

- Batty, M. 'Cities as Complex Systems: Scaling, Interaction, Networks, Dynamics and Urban Morphologies', in Robert A. Meyers (ed.), *The Encyclopaedia of Complexity & System Science*, Berlin: Springer 2009.
- Blaauw, M. 'The Epistemic Account of Privacy', *Episteme* 10.2 (2013), pp.167-177.
- Boano, C., & J. Rokem, 'Introduction: Towards Contested Urban Geopolitics on a Global Scale', in J. Rokem & C. Boano, *Urban Geopolitics*, London: Routledge, 2017, pp. 1-13.
- Brazier, F. & C. Nevejan. 'Vision for Participatory Systems Design', in 4th International Engineering Systems Symposium (CESUN 2014).
- Brazier, F., A. Oskamp, C. Prins, M. Schellekens, & N. Wijngaards. 'Law-Abiding and Integrity on the Internet: A Case for Agents', *Artificial Intelligence and Law*, 12.1-2 (2004), pp. 5-37.
- Broeders, D., E. Schrijvers, & E. Hirsch Ballin. *Big Data and Security Policies: Serving Security, Protecting Freedom*, WRR-Policy Brief no. 6, The Hague: WRR, 2017.
- Bruijn, H. de. 'We Worden Allemaal Gemanipuleerd Met Onze Eigen Data', *Trouw*, Persgroep Nederland, 18 April 2018.
- Hoven, J. van den. 'Value Sensitive Design and Responsible Innovation', in R. Owen, J. Bessant, & M. Heintz, *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society*, Hoboken, NJ: John Wiley & Sons, 2013, pp. 75-83.
- Lessig, L. *The Future of Ideas: The Fate of the Commons in a Connected World*, New York, NY: Vintage Books, 2002.
- Castells, M. *The Rise of the Network Society* (Vol. 12), Hoboken, NJ: John Wiley & Sons, 2011.
- Lovink, G., N. Tkacz, and P. de Vries (eds). *MoneyLab Reader: An Intervention in Digital Economy*, Amsterdam: Institute of Network Cultures, 2015.
- Luyendijk, J. *Swimming With Sharks: My Journey Into the World of the Bankers*, London: Guardian Faber, 2016.
- Negt, O., A. Kluge, & P. Labanyi. "'The Public Sphere and Experience": Selections', *October* 46 (Autumn 1988), pp. 60-82.
- Nevejan, C. 'Presence and the Design of Trust', PhD diss. Amsterdam: University of Amsterdam, 2007. *Witnessing You: On Trust and Truth in a Networked World*. Delft: Participatory Systems Initiative, Delft University of Technology, 2012.
- Nevejan, C., & F. Brazier. 'Design for the Value of Presence', in J. van den Hoven, P. E. Vermaas, & I. van de Poel, *Handbook of Ethics, Values, and Technological Design: Sources, Theory, Values and Application Domains*, Dordrecht: Springer, 2017, pp. 1-23.
- Pruijt, H. 'The Impact of Citizens' Protest on City Planning in Amsterdam', in L. Deben, W. Salet and M.-T. van Thoor (eds), *Cultural heritage and the future of the historic inner city of Amsterdam*, Amsterdam: Aksant, 2004, pp. 228-244.
- Rezaee, S. A., M. Oey, C. Nevejan, & F. Brazier. 'Participatory Demand-Supply Systems', *Procedia Computer Science*, 44 (2015), pp. 105-114.
- Sen, A.K., 2009. *The idea of justice*. Harvard University Press.
- Solomon, D., & C. Nevejan. 'Soil in the City: The Social Environmental Substrate', in A. Toland, J. Stratton Noller, & G. Wessolek (eds), *Field to Palette: Dialogues on Soil and Art in the Anthropocene*, London: CRC Press, Taylor & Frances Group, 2018, pp. 591-608.
- Zuiderveen Borgesius, J. F. 'Improving Privacy Protection in the Area of Behavioural Targeting', Diss. Amsterdam: University of Amsterdam, 2014.



CONFERENCE REPORT
FLYING MONEY
CONFERENCE,
RODE HOED AMSTERDAM



CONFERENCE REPORT

FLYING MONEY CONFERENCE, RODE HOED AMSTERDAM

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Introduction and programme

The conference started by discussing the **future of money**, and how money shapes society. This discussion intensified, focusing on the role of **cryptocurrencies** in society and in both legal and illegal business dealings, and how this impacts not only the financial system, but also changes the dynamics of **cities and its ownership**. Cryptocurrencies create tensions between democracy and justice, and lead to questions about the role and position of the public domain. Whereas within some communities, **parallel money structures** can coexist, having their own cultures, e.g. Hawala banking, or the Zuidas. More research and new regulations are necessary to establish the boundaries of the playing field before the tensions between technology, democracy, justice, privacy and transparency erupt.

A combination of many intriguing stories about **investigations of illicit financial flows** and concrete examples from European cities on the **regulation of urban finance**, the discussions moved towards the future and potential opportunities. This included how technology can be used to help and eventually shape the **future of financial intelligence and governance**. Knowledge from a diverse range of disciplines was exchanged during the conference, with many stakeholders included in a valuable network, facilitating European-wide cooperation between cities. The conference challenged all stakeholders to acknowledge rapid innovation, and helped establish new cross-sector connections by bringing a wide range of perspectives and organizations together.

In this report you will find summaries of all the presentations given at the Flying Money Conference, which was held between 22-24 May 2018. Furthermore, a reader is being prepared, comprising 20 in-depth articles, while videos of the conference talks will also be released.

-DAY 1-

MAY 22ND 2018

On the first day of the Flying Money Conference, a wide range of perspectives on global developments, digital money flows and alternative currencies were discussed. In the morning, we started with the ‘why’ of this conference, which was explained by the mayor of Amsterdam and a dean at Amsterdam University of Applied Sciences. After their inspiring words, we continued looking into the future of money and also wondered whether we really know who owns the city. In the afternoon, we examined the meaning of cryptocurrencies in the city and learned more about parallel money structures in the city.

09:00 AM SPEECH

MAYOR OF AMSTERDAM JOZIAS VAN AARTSEN

Dear guests,

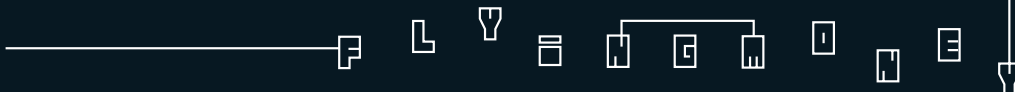
Welcome to Amsterdam and to the Flying Money conference.

Amsterdam attracts all kinds of interested parties. This means that investors and companies are among those coming to Amsterdam. We are very happy about that. It's a source of prosperity, innovation and creativity.

But not every investor or company is equally well-intentioned. The source of investments can be difficult or downright impossible to identify.

This is by no means a new issue. Way back in 1672, a bookkeeper called Van Vlieck was found to have embezzled hundreds of thousands of guilders from his employer, the Wisselbank, an early version of the Dutch central bank. It turned out that Van Vlieck had been booking ‘malicious debits’ since 1657. His punishment was harsh. He was beheaded by sword. Speaking of fraud and corruption: that very same Wisselbank closed down in 1820. In 1794, it had emerged that the bank had been providing millions of guilders in illegal credit to the Dutch East India Company.

So this kind of thing is nothing new, although the types and consequences of crime, fraud and corruption are now somewhat different, and larger in scale. The world economy is so closely



intertwined that the failure of a single bank can cause a global financial crisis. In the globalised world, money can fly around the planet within a single day – from Spain to the Cayman Islands and on to Amsterdam. There are now digital forms of money that have their own distinctive practices and conventions. It looks as though banks are losing their monopoly in favour of Fintech companies. All of these changes are having an influence on the criminal world and the way in which criminals operate.

The question we now face is how we, as European cities, can arm ourselves more effectively against this.

European cooperation and knowledge-sharing will be essential in finding the answers to these questions. This conference can really help to make this happen.

It's important that there are specialists here from a range of different disciplines. The banking world, the technological sector and supervisory authorities. But also artists, journalists, academics and civil servants. This range of interested parties shows how widely shared concerns about these developments are. Hopefully, it will also help to find solutions. Because the problems are too complicated to solve from the perspective of a single discipline or sector.

It is our duty, including our moral duty, to protect residents from being taken advantage of – young people who become involved in drugs wars, victims of human trafficking and honest businesspeople who are unable to compete against powerful investors who may not always play by the rules.

This conference offers an excellent opportunity for more intensive cooperation between cities in Europe. This is why I'm so pleased to see various European cities represented here today.

My thanks go to everyone involved in every aspect of making this conference possible, especially de Hogeschool van Amsterdam.

And, of course, thank you for attending and showing a willingness to contribute to finding the solution to this important issue.

I hope you have an inspiring and enjoyable conference.

09:10 AM SPEECH

BY GELEYN MEIJER, DEAN OF THE FACULTY
OF DIGITAL MEDIA AND CREATIVE
INDUSTRIES OF AMSTERDAM UNIVERSITY
OF APPLIED SCIENCES

Dear participant,

Welcome to Flying Money. I am proud that the Amsterdam University of Applied Sciences has organized this conference together with the City of Amsterdam. Our university engages with the issues that affect the city of Amsterdam. A conference like Flying Money is one example how we achieve this.

The Amsterdam University of Applied Sciences is already doing a great deal of research into developments in the digital economy; its Money Lab research project, for instance, part of the Institute of Network Cultures lectorate, focuses on cryptocurrencies and digital money flows. We critically examine the consequences that these technological developments have for society traditional bodies and power relations, as well as the possible misuse of these technologies. We strive to make the theme 'digital money flows' accessible to a wider public. As a knowledge institute we see it as our role to share knowledge with our students, with our partners, and across different domains, so we are discussing this theme with artists, geeks, and activists as well as exchanging ideas with researchers, policy-makers and entrepreneurs.

Together I am confident we can find new solutions to the problems surrounding digital money flows. I have no doubt that this conference will lead to useful new perspectives, both at the European and the local level – which is good for Amsterdam, too, because the city should remain the haven for creative entrepreneurs that it has always been.

I wish you all a very enjoyable conference!



The future of money

9:15 AM Klaas Knot – president of the De Nederlandsche Bank (DNB) – stated that we are heading towards a less-cash society, and that a cashless society is not yet in the picture. Data shows that nowadays four out of ten transactions are made in cash and six by debit card. People like to have different payment instruments, and the instrument used appears to depend largely on the occasion and amount. A significant group of people still dominantly use cash in order to manage their budgets or for privacy reasons. These people are mostly under the age of 18 or over the age of 65. Only a small share of retailers do not accept cash; the probability that most retailers will stop accepting cash payments is very low.

Knot stated that the use of so-called cryptocurrencies as a payment instrument is very limited, and they are still not accepted as a stable medium of exchange. DNB does not therefore consider them as money, and refers to them as cryptos. But cryptos do pose significant risks in relation to money laundering and to investment issues. DNB monitors any possible activities related to cryptos by institutions it supervises, and considers which additional steps must be taken in terms of supervision.

There are many other innovations- such as instant payments- that will change the payment landscape. Innovations can further improve the payment system and increase consumers' payment options. Knot stated that we need to deal with the associated challenges of a less-cash society in such a way that cash continues to function well as a payment instrument. This is key for the accessibility and stability of the payment system.

9:40 AM Adjiej Bakas – trendwatcher and author of the book *The New Renaissance* – stated 'There is an increase in global political awareness. Governments and central banks can no longer have the power over the people. Our monetary system is bankrupt.' Bakas pointed out that the architects of cryptocurrencies are currently working together on new cryptocurrencies that will be based on things that are really valuable. Current cryptocurrencies, such as Bitcoin, are not based on things that are really valuable. Current cryptocurrencies, such as Bitcoin, are not based on things that are valuable. Adjiej Bakas cited the example of the Israeli cryptocurrency, Carats.iO, which is based on the value of the Israeli diamond exchange. The other example he gave is of China, which is currently building a new silk road and is creating a cryptocurrency based on this road. These are inspiring examples for other stakeholders in the world. Why don't we create cryptocurrencies based on monuments or artworks? 'A new currency in a parallel economy is needed by connecting and collaborating. We have the opportunity to build a new monetary world.'

10:05 AM Game design can have a valuable role in prototyping alternative economic logics and market mechanisms. **Kei Kreutler** – an artist and currently Director of Strategy of Gnosis – argued that the emergent properties of games allow players to experiment with social relations produced by economic incentives, in a world in which 'incentive design' and reputation-based credit systems are increasingly coming to the public's attention. Kreutler introduced the post-graduate research project PATTERNIST, a collaborative puzzle-solving game in which you have to collect, trade and combine elements to reveal the Patternist-3 exoplanet, appearing as augmented alien geography hovering above our own.

PATTERNIST's in-game economy foregrounds the idea of algorithmically optimized 'networked barter', in which assets are traded directly without a mediating signifier of value, suggesting the future of money may be a disappearing act.

10:30 AM 'We have to be aware that finance is radically different from traditional banking: the latter sells money for a price, and finance has nothing to do with this,' stated **Saskia Sassen**, Robert S. Lynd Professor of Sociology at Columbia University, New York. As an example, she used the student debt in the USA. Today this debt is over a trillion dollars, and it can never be cancelled. A traditional bank would not know what to do. Finance will look for solutions. In talking about finance we talk about the 'zone before method'. In order to have a view of the entire field, it can be very helpful to escape the boundaries of methods, to destabilize stable meanings, to open a window. We have reached a moment in Western society that is about transformations. It is no longer a question of more or less poverty, but of winning or losing.

There are a lot of examples. In the USA, for example, if you are unemployed for five or ten years, you disappear as a worker: you no longer exist. And then there's all the 'dead land' in the USA, land that can no longer be used and thus no longer exists. At the same time, there is a rise of 'intermediation' as a sector that is in between. Intermediaries can be found in the trade in goods like potatoes, but also in the trade in money. One characteristic of these intermediaries is that they rarely lose. And this involves many risks. Think about it: the total amount of 'money' that circulates in the world of high finance amounts to much more than all the money of all the world's central banks. The Federal Reserve – the US central bank – talks about 'dark pools of finance'; it knows nothing about 80% of the money that is traded. Needless to say, it can neither control nor regulate it. And the risk is rising. It becomes really disastrous when the logics of high finance meet products for those on lower incomes. 14.5 million low-income Americans (mostly Afro-Americans) lost all their money because of complicated mortgages. The business model of these mortgage was simple but dangerous, namely: sell as many mortgages as possible instead of selling money and earning through interest (like classic mortgages). Finance is no longer about money; it has created liquid assets to create money.

Who owns the city?

11:15 AM Journalist **Joris Luyendijk** spent two years doing research for his book *Swimming with the Sharks*, which is about London's financial sector, an extreme version of Amsterdam's Zuidas. He shared key insights into the mind-set and mentality of investment bankers and explained how a career in investment banking could be seen as 'a trap, a game and an addiction'. The rewards are large but uncertain – which makes it exciting and keeps you coming back for more. Moreover, the long working hours (the bankers hardly sleep at all sometimes, when they're doing an 'all-nighter'), the loss of touch with significant others, the career model with good prospects of promotion (with of course an increase in salary), all contribute to the gamification and delusion of the job. It looks like a sect, where members are also separated from their significant others. And this is exactly why just changing the incentives is not enough. This implies that human beings are solely rational beings, but there's also such a thing as culture. The bonus is not just a reward; it must be seen in relation to the bonus of others. It marks your place in the hierarchy. So, a change of culture is needed as well. Otherwise little will change and we shouldn't be surprised if many bankers appear



to have no sense of responsibility or guilt for financial crises and scandals in the future.

11:30 AM Jan Willem Bastijn – CEO of EMEA Capital Markets at Cushman & Wakefield – allowed us a glimpse of his world of real estate and capital flows in real estate to help us understand ‘who owns the city’. To start with, capital flows are global and mainly flow through four global hubs: New York, London, Hong Kong and Singapore. In 2017, worldwide a total of \$1.33 trillion were invested in real estate, which is twice the amount just before the crisis of 2008. Most investments come from institutional investors like pension funds and insurers. Essentially, investors only care about two things: sustainable returns and growth. The risks vary, however, from high through medium to low. The high-risk takers include hedge funds, private equity and investment banks. But nothing is what it seems: it’s not the case that traditional low-risk investors like pension funds never take high risks. Deals like these are wrapped up and invested via traditional high-risk investors.

Furthermore, there are different types of real estate, such as office buildings, retail buildings, warehouses, hotels, residential buildings, data centres, student housing and mixed-use buildings, and each has different risks, returns and liabilities. Although the money comes from investors, they are often physically represented by landlords, having little connection to the city in which they invest. According to Bastijn, cities should be more aware of this phenomenon and investigate who the real owner is of, for example, a housing project. The current real estate markets in cities are booming and returns are lucrative, and it’s all about three things: gateway cities, future and growth. It is hard to predict, however, how this will exactly look like in the future, with Asia as a new player, Trump as president and Brexit as a reality. The US market is functioning very well, Asia is investing almost more money in Europe than the number 1 investor (the USA) and although Brexit has caused shifts in investments ever since the referendum, high-risk investors are back in London. According to Bastijn, the rules for this market should be set by the public sector, not the private sector. The public sector has the task to learn from the past by relying on big data, thereby facilitating the future.

11:45 AM ‘Always wanted to know how to evade tax? It’s easy! A guided tour in which the most amazing parts of the Netherlands are shown!’ This promotional text announced an art project named De Kamerplant Tour by artist **TINKEBELL** and financial journalist Arno Wellens (author of the book *Euro-evangelie*). A Dutch law states that if someone wants to register a company at a PO box address, the company must have an office that contains a living house plant (*kamerplant*). Hundreds of companies have a PO box address and one room with one living plant in Amsterdam’s business district, the Zuidas. The aim of De Kamerplant Tour was to raise awareness of tax evaders in Amsterdam, and to create transparency in the investment market and its effect on the city’s character. TINKEBELL emphasized the importance of awareness among people outside the financial sector’s ‘bubble’. Due to her initiative, companies have started to move to different areas of Amsterdam. She recognized her project as the start of a change in Amsterdam’s climate of tax evasion.

12:00 AM Caroline Nevejan – chief Science Officer of the City of Amsterdam – started her talk by arguing that the city is a place where taxes, rules and justice are central factors for creating a safe, reliable and high-trust society. In the last decade, the commercialization of the public domain, accompanied by the commercialization of the private domain, has been

undermining cities to the core. Defining money as ‘trust in networks of communication’, the fast and ubiquitous introduction of global digital networks is adding to these undermining forces. Nevejan further argued that the public domain in which cultures are shared, markets are organized and justice is executed, is threatened by these developments. The gathering and selling of an abundance of personal data, jeopardizes privacy and therefore democracy. On the other hand, the scarcity of data on transactions and ownership, jeopardizes transparency, which is a requirement for justice. To counter these developments, Nevejan suggested the following: design urban impact of global dynamics; focus on the city as a physical territorial place; understand the city as a complex system; invent new roles, relations and governance; support ecologies of innovation; and share research and design.

12:15 PM The **panel discussion** started with the issue of how we can create a connected ecosystem in a city and how we can bring multiple stakeholders together. What are the opportunities? For example, when looking at banks and the gamification in this sector, as Joris Luyendijk told us about, and thinking about digital currencies, which are also part of gamification, do banks fulfil their role in the new type of economy?

A post-national class has emerged, according to Luyendijk. A class of people who live in big cities with similar offices and houses. They feel more connection with peers in other cities than with the city they live in. They feel less obliged to pay taxes; they feel more solidarity with Bangladesh than with a nurse in Leeds. Digitalization is also de-territorialized; nations (central banks) no longer play a role in this sector.

Nevejan emphasized that despite what Luyendijk said, we *are* a territory: a place where we need food, water and each other. Being aware of the dynamics of the post-national class doesn’t mean we don’t have to do anything about it. The majority of the population of Amsterdam are not expats, so Nevejan likes to focus on them as well. They like a nice atmosphere. How can we as a municipality safeguard that climate, a climate in which people dare to know each other?

Bastijn echoed what Luyendijk said about millennials. Amsterdam should be protected, but the question is: what is Amsterdam? After the Brexit referendum, many bankers moved to the Zuidas and bought houses costing €1.5 million, but they don’t care. An investor only cares about two things, Bastijn stated: getting the return and having the liquidity. So when you come to the city as an investor and spend a lot of money to make something better, you get your return. But to earn this return, you cannot leave, so the liquidities offered by other businesses – like talent, growth, infrastructure, people being open-minded and speaking English, etc. – are very important. So it’s not a zero-sum game.

Furthermore, you have to adapt. You have to accept the fact there will always be differences in education, welfare, etc. The question is, how to accommodate these differences? Bastijn stated that he’s a big fan of affordable housing, which can be made possible by taxes, for example.

How can we protect our city? Nevejan said that Facebook wants to own the food market. What can we do to prevent a situation in which we are no longer getting any food? A similar thing happened 20 years ago: Amsterdam sold its cable network to UPC, and when UPC started a fight with CNN, the latter refused to continue broadcasting in Amsterdam.



TINKEBELL said she thinks it's all about transparency. A lot of things, like the financial world, are a blur to most people. And the same applies to this story about food.

Bastijn pointed out that the underlying theme is bigger. We're constantly being disrupted. By anything. Protection might be the wrong approach; we have to adapt, although that can be painful. He recommended a taskforce that focuses solely on capital flows, and not just the illicit ones. You have to find out where they come from; the origin of capital has to be checked. It could even be funded by the public-private sector.

Luyendijk added that the government is also disrupted. They're used to setting the rules, but after 30 years of economic globalization we can conclude that politics is stuck at a national level, while the real power is elsewhere (in Brussels or big companies, for example).

Nevejan said things are going on in the city that are deeper and more serious than the problem that the city is busy, and she hopes that this is the start of a long conversation. She invited

Bastijn to become a member of the taskforce he mentioned earlier, which in her opinion is a very good idea. As a municipality, we want rich and poor to live together in a good way. Basically, we're equal. She said she is happy that we dare to know what we must know.

It's important to differentiate, Luyendijk emphasized. He said he's glad to hear that Amsterdam thinks ahead and refuses to welcome certain short-term investors.

Meaning of crypto in the city

13:45 PM Marloes Pomp – Manager International of the Dutch Blockchain Coalition (DBC) – said that she believes that our digital-oriented nation (Bluetooth and Wi-Fi are Dutch inventions) and our 'polder model' (consensus decision-making) encouraged us to adopt blockchain technology. The government stimulates the blockchain ecosystem and therefore established the DBC, which is a collaboration between universities, corporations and the Dutch government. For more information about the vision of the future of blockchain for the Netherlands: <https://dutchblockchaincoalition.org/uploads/pdf/Visiondocument-Blockchain-For-Good-EN.pdf>

In the vision document, five use cases for reliable and socially accepted blockchain applications are named that are being built on the basis of public-private cooperation. The applications are important for our economy, our society and for areas in which the Netherlands plays a leading role in the international arena. They are therefore demonstrably valuable applications of this new technology. The selected use cases are:

1. Self-Sovereign Identity

With self-sovereign identity (SSI) solutions you have a digital safe with information about your identity that you can use, for example, for accessing your diplomas, purchasing a house or demonstrating that you are of a certain age. You manage your own data, which you can put to use in a wide range of situations. An infrastructure is being built for the digital identity and

a new system of agreements. Accordingly, a basis is being laid for the provision of services from the government and companies in which people take centre stage instead of individual solutions that have been devised by a single organisation.

2. Logistics

Blockchain offers many opportunities for more transparent, reliable and honest logistics chains that result in fewer administrative burdens and more efficient transport. This subject has been chosen because the various initiatives in the area of logistics develop most rapidly, the logistical initiatives can be quickly scaled up worldwide, the Netherlands is an important player in logistics and because it will profit the Dutch economy the most.

3. Educational certificates and diplomas

By developing a generic building block for the Dutch and European blockchain infrastructure, official documents such as diplomas, certificates and registers can be reliably shared and verified. This case has already been tested on a small scale in several countries and is now ready for scaling up to the European level.

4. Pensions

The changing employment market in which Dutch citizens change jobs faster and more frequently poses considerable administrative challenges for pension schemes that can result in uncertainties for pensioners. A simple question such as: 'how much pension have I built up where?' can be answered more easily by using Blockchain technology than with the current systems.

5. Compliancy by design

Grant systems (subsidies) are now often highly complex for users and we sometimes read about abuses. What we need: more transparency and automation of processes so that it becomes easier for everybody. Blockchain offers that possibility. In the language of technology, that is: "Compliance by design". With this, we mean that the money is used for the intended purpose and in the intended manner.

The DBC also pays attention to the dark side of the technology. With every new technology, security risks are amplified or diminished depending on its characteristics. This whitepaper provides a framework on the major security considerations to consider when adopting blockchain technologies. [Download the Blockchain Cyber Security Framework](#)

The framework, commissioned by the Ministry of Justice and Security, was written to be used by decision makers in organizations that are planning to adopt blockchain technology. The framework is meant to be a high-level practical guide of the top security concerns an organization should consider when starting their own blockchain application or migrating a current application to this new environment.

Another example is the research project from TNO (Netherlands Organisation for Applied Scientific Research) and Interpol, who are collaboratively teaching people the ways that criminals use blockchain on the dark web.



14:00 PM Mariana Gomez de la Villa – global head of ING’s Blockchain programme – said she wanted to share her journey within the blockchain so show the audience how blockchain can be an enabler in their day-to-day business.

Four years ago, she started exploring blockchain technology with ten colleagues at ING Bank. They were passionate about the technology and the possibilities it provides for the banking ecosystem, so they explored it in their spare time. Last year, ING started deploying blockchain pilots, and the plan is to launch the first blockchain product this year. The road to make these pilots commercial is quite intensive, as ING wants to ensure that the product is safe and complies with all regulations. In every pilot, experts from a specific field are invited to discuss the potentials and applications of blockchain technology and also test the pilots in practice. Regarding trade finance, for example trading agencies, customers, producers and regulators are asked to share their knowledge and provide feedback as to validate the solution. In Gomez de la Villa’s opinion, blockchain is not the end goal but an enabler of solutions. It can enhance and streamline different processes and business logic by reaching remote consensus, besides providing immutability, finality and provenance to the decisions made. These four attributes provide major potential; blockchain can simplify operations and improve inefficient and outdated processes and systems. And it also makes it harder to commit fraud: when the provenance of an asset is known, a regulator can easily track the asset and check its status. There are benefits for the city as well. For example, in localized currencies, state-issued digital currency and solving identity problems. Of course, there are also technical and regulatory challenges, that need to be solved before the value of blockchain can be fully unlocked and we can reach mass scale adoption.

14:15 PM Denis Roio, also known as Jaromil – CTO and co-founder of the Dyne.org Think & Do Tank – recalled the leaked footage from 2011 (released by WikiLeaks) of a US Army helicopter shooting Iraqi civilians and two journalists. After this release, WikiLeaks became a popular platform for whistle-blowers. However, politicians in the USA didn’t like this at all and blocked WikiLeaks’ Visa and Mastercard accounts without a court mandate. At that moment, the hacker community started to use Bitcoin, so they were able to continue supporting WikiLeaks. So, Jaromil emphasized, there was a political reason why cryptocurrencies were embraced. We must concentrate on the new ethics in the public and private sectors deriving from this change, instead of using the technology to empower governments and banks. The technology can protect our data, rather than siloing it and misusing its value, as is the case with Uber and Airbnb.

Jaromil stated: ‘Your value is not in your individuality; it is in your relations with others.’ The Mafia understands the relational value in cities all too well and knows who is who, who owns what and who lives where. The Mafia are very good at using systems for their own purposes. When the Italian government banned ‘classic’ casinos and only slots were still allowed, the Mafia couldn’t wait to fill the slots with their money. Money is laundered via legal structures and the best way to fight money laundering is through people who know (like the Mafia) who is who, who owns what and who lives where. This can be done by local journalists or social movements. Spok (Spekulatie Onderzoeks Kollektief; Speculation Research Collective) is a good example. This Amsterdam collective was set up by squatters and tenants in 1978 and maintains a sort of parallel register of property. They know exactly who owns what in the city and what transactions take place.

Jaromil argued that we have to discover the meaning of justice, before altering it. 'It's about knowing what happens in a group of people who trust each other.' After that, we can create systems (with cryptocurrency and blockchain technology) that can truly unite individuals and offer transparency. At the moment, certain projects support this. For example, Commonfare is a project in which poverty is being examined, as is the way poverty effects people, their access to information and ways to support them. Another example is the D-cent project, in which political parties that promise participative democracies are examined: do they keep their promises, how transparent are these parties, what technologies do they use, etc.? Only by listening sincerely to people and giving them our votes, can we beat the populists.

14:30 PM 'We are heading towards a "non-money economy",' **Stefan Heidenreich** – media theorist and consultant based in Berlin – states in his book *Money*. Starting his talk titled 'Money, desire and distribution', Heidenreich explained that economy is about distribution and not about money. In ancient times, money didn't exist; people exchanged goods and they sort of remembered who owed what to whom. So, first there was credit and only later money was invented. As the title of the presentation hints, money and desire are closely linked to each other. Our desires are plenty and somehow they have to be made correspond to resources. Technical means allow us to consider other modes of distribution than markets and money, such as algorithms and matching. Distribution is a 'matching' problem that requires data, networks and computation. Heidenreich stated that a blockchain can be used to provide an overview of data exchange systems, although in most cases, services can be managed much more easily with other tools.

Mediatransitions often unfold in two phases:: old media imitated by new ones, and the phase in which the innovation is disruptive or sustainable for old institutions. Bitcoin is obviously in the first phase; blockchain is in between, and phase two is coming. This will be the phase of 'smart matching' in which property is replaced by access and use. Heidenreich said that he reimagines an economy where we don't have money or fixed assets. Autonomous houses can use 'smart matching algorithms' and can, for example, match potential tenants or call someone to fix the house when it is broken. Moreover, the question arises: how to go from A to B, from money to matching? Heidenreich explained that this transition is already happening without being widely noticed with tools and methods like recommendation apps, social ranking in China and profile matching.

14:45 PM Host Berkhout started the **panel discussion** by stating that the session had emphasized the different ways in which we can implement cryptocurrency and blockchain technology in an urban environment. The blockchain environment could be a new system of decentralized trust in the way that we can exchange information. But how to deal with the Mafia, who misuse the same system?

'You don't fight the Mafia with control and police', Jaromil said. 'You fight the Mafia with culture.' That's why journalists and old-school investigation techniques are so important: who is who behind white-collar crime? How can we empower them and how do we pay them?

Gomez de la Villa said that the knowledge gathered by ING and, for example, the Blockchain Coalition, must be shared with organizations like the government, regulators and clients. 'We owe that to society.'



Privacy is a big theme nowadays. How does the panel reflect on this?

Pomp spoke up: now is the moment to discuss what kind of society we want and how technology can help us. Learning by doing and sharing all the experiences and discuss them, is very valuable. We have the opportunity to learn from the past when governments were overwhelmed by new technology and business models, like Uber and Airbnb. And when we're talking about criminals: they're always steps ahead. It's important to be proactive and set rules and smart regulations.

The beauty of technology, Gomez de la Villa said, is that it also can help us to solve problems.

Kreitler said he was curious about the panel's opinion of the question of immutable identity or the right to be forgotten. There are crimes that can be fully tracked but are much more dangerous than the untracked. As an example, she pointed to new digital ways of identifying refugees that are intended to help them, but that can also be very dangerous.

One of the goals of the De-code project is to design attributional ways to prove your identity, Jaromil explained. By using attributional ways you can prove you're 18+ or that you live in a particular city without giving your address or showing your passport. You decide when to reveal that data and to whom.

We must be very careful with identity, Pomp added. There are a lot of start-ups launched by refugees and ex-refugees who are doing something with blockchain and identity because they think blockchain technology is able to solve the problems that refugees are faced with; for example, not being able to prove their education level or having to use temporary wallets as they are not allowed to open bank accounts. We have to be aware of the right to be forgotten, especially when identity is linked to biometrics.

Nevejan, in the audience, stated that we think we don't have a Mafia problem in the Netherlands, that the Mafia exists only in Italy. But we have big gangs here as well. She continued: 'Jaromil emphasized: "forget about technology, forget about blockchain; it's about old-school investigation techniques and a change of culture." As a municipality, we have to organize counter-voices as well and create diversion in the debate. But how do we do this?'

This panel is a good example, Jaromil said. The members of the panel don't necessarily agree with each other but that's a good thing; otherwise it would be preaching. We have to listen why people claim their justice, otherwise we'll get no justice or peace.

Parallel Money Structures in the City

15:35 PM How can we use money to fulfil the needs of the city we live in? **Edgar Kampers** – founder of Qoin, a social enterprise that creates, develops and supports impact-driven currencies and blockchain initiatives – argued that we have to create new currencies that will help solve the problems of the future. Capitalism has brought us a lot, but the problem is that money is designed for globalization, industrialization and innovation. Local currencies can stay in local communities and contribute to solving local problems like pollution, housing shortages, youth unemployment, etc.

In the world there are about 100 ‘impact-driven currencies’. One example is a local currency that was introduced to prevent elderly people from becoming lonely, which is a great problem in the Netherlands. The currency can be earned by doing voluntary work in a retirement home. It can be used to buy things in local shops and to pay bills in local restaurants, and one gets a discount by paying in this currency. As a result of its introduction, the number of volunteers has increased and loneliness among elderly people has decreased. However, a number of volunteers quit their voluntary work because they didn’t want to be rewarded for work they were doing for altruistic reasons. That’s why it’s also possible to donate the currency to a charity, cultural organization or sports club. The city of Amsterdam can also build inclusive societies with a currency that is interesting for everybody, including tourists. Taxes could also be paid in local currencies. This could be controlled as long as the city, community groups and/or business communities work with financial institutions or known ways of organizing loyalty schemes, and governments can ensure that the local currency meets legal and fiscal requirements.

16:00 PM Greetje Bos said that she still had twenty days left of being a public prosecutor before joining the local government of Breda. She went on to say that numerous investigations over the past ten years have shown that cash is still predominantly king within the criminal world, and that money has to be laundered so it can be used. ‘In Dutch criminal law, money laundering is a criminal offence and offenders can be jailed for six to eight years. According to the law, a person “who hides or conceals the real nature, origin, location alienation or the relocation of an object while knowing that this object, directly or indirectly, originates from an offence” is guilty of money laundering. In the Netherlands, money laundering is an independent offence, which means that the prosecutor only needs to prove the absence of knowledge of the origin or source of the money to be able to identify it as financial crime.

Hawala is a phenomenon that is gratefully used by money launderers because it is able to move money out of the government’s sight; banks don’t receive bags full of banknotes. That doesn’t mean that banking via the hawala system is always money laundering; this is only the case if criminal money is being transferred through hawala. Hawala originated in the Indian subcontinent (there are stories that hawala has existed for 2000 years) and was probably brought to the Netherlands by immigrants as a means of remitting funds to relatives in their homelands. At first, this did not imply criminal money, but over the years the system has become infested with criminals.

Research shows that there is a large difference in hawala users. Traditional clients have a lot of trust in their bankers; they do not need any proof that their small amounts have been transferred to their families in their homelands. In contrast, criminal activity is based on large amounts and there is no trust involved; the hawala banker and client do not know each other and are often from different ethnic backgrounds. They use tokens to justify the transfer of money by using the numbers and letters on a bill. Only when this token is given can the money be transferred. The examples used by Bos (suitcases and plastic bags filled with cash) show how couriers are regularly dispatched to transport vast amounts of cash between bankers or to and from clients.

16:25 PM Nikos Passas – professor in Criminology, Northeastern University, Boston – said that he wanted to ‘smuggle’ some facts into the policy making debate about considerations



by the European Commission (EC) to limit cash in countries within the EU, the so called CPL (cash payment limitations). The EC's argument is that CPL can be an effective measure against serious crime. Passas argued that cash is not just king: it remains extremely popular, both in absolute terms and in respect to GDP because it protects privacy, it cannot be hacked and it doesn't run out of battery in emergency situations.

One reason to introduce CPL is to fight terror. However, when you look at most terrorism you are speaking about tiny amounts. Most terrorist attacks in Europe in the past 20 years cost less than \$10,000 and in 73% of the plots in Europe in 2014–16 the terrorists generated at least a part of their income from legal sources. The only expensive attack (9/11) cost about \$230,000, but the money came legally into the USA and no cash was involved. Moreover, it's not 'no cash, no crime': the Laundromat case alone involved close to \$21 billion, 5140 companies, 732 banks and 96 countries. Or look at the LIBOR fixing, the Madoff scandal or the examples in the Panama and Paradise papers. And if cash were not an option, CPL would push serious criminals and money launderers to use other methods, channels and locations that are hard to monitor. We don't want to promote the better organization of crime. Research from EU countries with CPLs in place show higher levels of corruption and informal economic activity. And when you ask corporate officials how much crime they see in their countries, the 'usual suspects' like Nigeria and Egypt score high, but so too does Norway. Argentina and Russia both score much lower, for example.

Furthermore, countries with high denomination banknotes (like Japan, Singapore and Switzerland) have low levels of crime, while countries with low denomination notes (Brazil, Nigeria and Venezuela) have high levels of crime.

It is much better to deal with tax evasion through effective state services and responsiveness to citizens, regulatory reforms to reduce tax avoidance, and related lawful but awful practices. Introducing CPL is fighting terror with error. Take for example the hawala system. This is a vital payment system that facilitates, like other financial services, serious crime. But it also brings big cities together with small cities. People use the hawala system simply because it is a better business model: there are low costs for the transfers and the exchange rates are the best.

Also, there are no cash machines and electronic payment models in places that largely use hawala. The entire humanitarian community in Somalia relies on the availability of money service businesses to do business, including transferring funds for project activities to organization staff or local partners and paying for staff and office running costs. Without money service businesses, the UN and NGOs would be forced to carry cash to pay day-to-day operational and programme costs, placing funds and staff at risk in an insecure environment. Passas stated that it is not criminal but very typical to use tokens as reference for hawala transfers. Hawala traders want to work with law enforcement; they do not want terrorists as clients. Regulation to prevent the use of financial services for serious crime is necessary, but has to be proportionate. If we're not careful we'll drive legal and illegal systems underground, Passas warned. 'There are a lot of intermediaries. There is no transparency but there is traceability. If you follow the transactions you can follow the money; it is an intelligence asset. Community policing approaches are the best answer.'

16:50 PM The European Internal Security Fund (ISF) project CONFINE focuses on the financial indicators of human trafficking. **Annemie de Boye** – coordinator of Arrondissementale Informatie and Expertise Centre Limburg – showed how local governments (in this case, a collaboration between the city of Antwerp and Genk, the University of Leuven and RIEC Brabant–Zeeland) face a considerable challenge when trying to end exploitative activities.

In this case, a number of car washes operated by Indo-Pakistani people were investigated because human trafficking was suspected. It was discovered that the people at the car washes were Afghan refugees working without contracts. The working conditions were very poor and the victims were often not sure whether they would be paid. Mattresses were found in the car wash – in the middle of winter. ‘The most difficult issue is that they don’t see themselves as victims,’ De Boye said. ‘They fled war and thought that they were being looked after by the owner of the car wash.’ Ultimately, 35 infractions were documented and three car washes, two shops and four houses were closed down, and three illegal foreign workers were repatriated. De Boye explained that as soon as the institutions put pressure on the companies and were ready to close them down, the owners changed the structure and exploitation of their companies. Because of the lack of administration and the employment of illegal foreign workers, paper trails are very poor. The statements made by the people who were working there seemed to be very much prepared. They also worked with aliases, which made it very difficult to trace the criminal activities. Also, various ‘legal’ arrangements were used to create an impression of legitimate employment, for example on paper workers were called managers, shareholders or associates. Bankruptcy was often initiated when forced closure seemed imminent, and then a new car wash would be established at the same location by the same people. So the principle of ‘follow the money’ is hard to apply. And the question still remains, how much money was made in this case?

17:15 PM When criminals buy heroin in Afghanistan, they have to pay for it in cash. How do they transfer this money? The **panel discussion** started with this question from Mr Sher Shah Nabi, who works at Erasmus University Rotterdam. Mr Nabi has been doing research on hawala banking since 2007 and has found a lot of criminal cases of hawala in Amsterdam. Nabi stated that criminal networks are present in the hawala banking system and was curious to hear from Professor Passas how to distinguish criminal and legal networks from each other.

Passas agreed that it’s about separating the ‘bad’ from the ‘good’, but also emphasized that the same is the case with other financial systems. And moreover, Passas argued, the more you look, the more you find. Indeed, criminal money is involved, but hawala banking is also a fundamental and socially useful practice. Don’t throw the baby out with the bathwater, he concluded.

Jaromil is a member of the hacker community that sees hacking as the answer to many problems. With this in mind, he said he was curious to know why the Belgian state doesn’t use the victims of human trafficking to find out more about the modus operandi of criminal networks, instead of sending the victims back to their home country.

De Boye reacted by saying it’s possible to give victims of human trafficking permits for the duration of the investigation. Unfortunately, the victims don’t see themselves as victims and thus don’t make declarations and are gone by the time investigators want to speak to them.



-DAY 2-

This day started with an emotional speech of Bill Browder about the importance of fighting illicit financial flows. This touching story was followed by many intriguing stories about investigations of illicit financial flows and concrete examples from European cities on the regulation of urban finance. At the end of the day and of the conference the discussions moved towards the future and potential opportunities. This included how technology can be used to help and eventually shape the future of financial intelligence and governance.

BILL BROWDER

9:00 AM THE MAGNITSKY ACT

William Browder

For ten years I was the largest foreign investor in Russia, until I was expelled from the country in 2005 and declared a 'threat to national security' for exposing corruption at Russian state-owned companies.

In 2008, my Russian lawyer, Sergei Magnitsky, uncovered a massive fraud committed by Russian government officials, which involved the theft of US\$230 million of taxes that my companies had paid in 2006. Sergei testified against the state officials involved in this fraud and was subsequently arrested by the very same officials he had testified against. He was imprisoned without trial, and systematically tortured in an attempt to get him to retract his testimony and sign a false confession. However, despite the physical and psychological pain he endured, he refused to perjure himself. On 16 November 2009 he was sent to an isolation cell and beaten by eight riot guards with rubber batons until he died. He was 37 years old, and left a wife and two children.

The Magnitsky case is the most well documented case of human rights abuse to emerge from Russia in the last 35 years. During his 358 days in detention, Sergei filed over 450 complaints about his mistreatment. In almost any other country, and certainly any civilized country, the officials involved would have been punished for their crimes.

Unfortunately, this is not what happened in Russia. In Sergei's case, the Russian authorities circled the wagons and began a state sanctioned cover-up of Sergei's death and the \$230 million fraud. Everybody involved enjoyed absolute impunity. Some of the most complicit officials were promoted and awarded the highest state honours.

Upon realising that it is impossible to get justice in Russia, I sought justice outside of Russia, and started a global campaign to impose targeted visa bans and asset freezes on human rights abusers and kleptocrats. The US was the first country to impose these 'Magnitsky sanctions', with the passage of the *Sergei Magnitsky Rule of Law Accountability Act* in December 2012. I have since campaigned for the law to be applied to all countries (not just Russia) and in 2016 the US Congress passed the *Global Magnitsky Act* which targets individuals anywhere in the world responsible for committing human rights violations or acts of significant corruption. There are now seven countries around the world that have Magnitsky Acts or Magnitsky Amendments in place, including the US, Canada, UK, Estonia, Lithuania, Latvia and Gibraltar. Similar initiatives are currently taking place in France, Denmark, Sweden, the Netherlands, Ukraine, South Africa and Australia.

Why targeted sanctions? Because criminals from Russia live in a precarious state. Just as easily as they stole somebody else's money, that money can be stolen from them. As a result, the people who commit these crimes like to keep their money safe in the West. They buy property in the West, they vacation in the West, and they send their kids to school in the West. Magnitsky sanctions are effective because they create direct, personal consequences for human rights abusers and kleptocrats, impacting their lifestyles and assets, where it affects them most. At the same time, these sanctions spare the innocent citizens who make up the majority of the population of a corrupt or abusive regime.

Putin's reaction to the Magnitsky Act is evidence of how powerful Magnitsky sanctions can be. When Putin was re-elected in 2012, he made it his top foreign policy priority to ensure that the Magnitsky Act did not pass. When the law eventually did pass, he retaliated by banning the adoption of Russian children by American families. He then put Sergei Magnitsky on trial, in the first trial of a dead man in the history of Russia, with me as his co-defendant. Furthermore, the recent action in 2016 of a Russian government-connected lawyer visiting the Trump Tower to request the repeal of the Magnitsky Law, reinforces the point that Vladimir Putin has shown a huge sensitivity to the Magnitsky Act. From this behaviour it is clear that by going after the wealth of corrupt officials, we have hit the Achilles heel of the Putin regime. It is crucial to deny corrupt individuals and human rights abusers the opportunity to benefit from strong financial systems, strong property value and to stop them from taking advantage of free trade, free economies and free societies.

Investigating illicit financial flows

9:30 AM 'Hundreds of billions of pounds are being laundered every year through the UK.' **Misha Glenny**, journalist and author of *McMafia*, started by quoting from a report issued by the UK parliament's Foreign Affairs Committee and then focused on why little has been done to prevent this, along with why London has become the global capital for this kind of activity.



One of the primary causes of this, according to Glenny, is the 1986 ‘Big Bang’ and the deregulation of financial markets, which allowed banks and corporations to transfer huge swaths of money internationally without notifying regulator officials. Along with the collapse of Communism as an ideology, the Big Bang allowed for the rise of gangster capitalism and the abuse of a vulnerable financial market.

Glenny used the example of the former Yugoslavia, where an ethnic war was going on. Ostensibly, Serbia’s Slobodan Milošević and Croatia’s Franjo Tuđman were waging war against each other, but they were secretly collaborating to bring illicit goods and services from around the world into the European Union. This is an example of what Glenny referred to as a ‘melting of political power and criminal power’.

In the wake of these events, both New York and London competed for the title of number one financial capital of the world by lowering their regulatory standards. Glenny then described how residential property became the primary method of laundering money, even going so far as to say that the physical places in London are owned by ‘anonymous companies’ that are not required to reveal their identities.

Glenny also remarked that this is a global problem and not just one restricted to the UK or Europe. In fact, he pointed to several events (including Brexit) that suggest that Amsterdam will be the next financial capital of the world.

9:45 AM Tom van Engers – professor at the University of Amsterdam’s Faculty of Law and programme director of the research programme on Crime and Terrorism within IAS (Institute of Applied Science, which takes a multiple perspective approach) – stated that the best way to look at criminal activity is from a business perspective. He continued by saying that criminal activity is profit driven and depends on mechanisms like demand and scarcity, the latter enhanced by law enforcement agencies themselves. Despite this, however, it is still the purpose of law enforcement to monitor and punish criminal activity, including money laundering. To keep out of the government’s sights, criminals who want to launder money pretend to run a ‘normal’ business. It’s important for law enforcement agencies to understand the legitimate business models so they can look for anomalies (abnormalities).

For this, Van Engers pointed to the use of machine learning algorithms to help in the detection of abnormal cases within digitally traceable infrastructures. From this pattern recognition process, a risk assessment is provided to determine whether an abnormal pattern is related to criminal activity grounded in the physical world. According to Van Engers, the approach to combating crime should ideally be: collect data, identify patterns of criminal logistics and infrastructures, ground those findings in the physical world, run computational simulations for predictive modelling and actively intervene. In short, Van Engers called for testing the effectiveness of policies ‘in silicon’.

10:30 AM The use of machine learning artificial intelligence has proven to be a precarious issue when it comes to complex data analysis and institutional interventions based on those analyses. This brings us to the next speakers for this panel, **Rob Procter** –Turing Fellow at the Alan Turing Institute and Professor in Computer Science at Warwick University – and **Andrew Elliot**, a research associate at the Alan Turing Institute.

Procter defined the mission of the Alan Turing Institute, namely to develop state-of-the-art methods of data science and artificial intelligence (AI) and to promote their adoption in the private and the public sector. Procter said he is working on machine learning algorithms to detect criminal activity in social networks. One of the most promising ways to detect criminal activity is build algorithms to look for anomalies in patterns of behaviour, that is deviations from the 'normal'. However, there are numerous challenges to the detection of anomalies using machine learning. It may be hard to distinguish 'normal' from 'abnormal;' behaviour; there may be very few known examples of abnormal behaviour compared with normal; . not all anomalies are criminal behaviour and criminal behaviour can change over time. Furthermore, because the predictions made by machine learning algorithms are not completely accurate, you still need human beings to interpret them and decide what actions should be taken ('human in the loop'). This can be difficult because the algorithms are complex and so their behaviour can be very difficult for people to understand (the 'black box' problem). Unfortunately, machine learning algorithms that are relatively easy to interpret are generally lower in accuracy, and vice versa. So we must find ways to 'open' the machine learning black box, which will enable us to understand the evidence for a particular decision. Then we will know whether following it up will be an effective use of law enforcement resources.

Procter explained that two principal types of machine learning algorithms are unsupervised and supervised. In the case of supervised learning, the algorithm is trained by feeding it with examples of the kind of behaviours one wishes to detect.. In cases where there are too few or no training examples, then unsupervised learning algorithms can be used to discover underlying patterns or clusters in the data.

Moneylaundering is one example of activity that is hard to detect using supervised machine learning because there are too few examples of bogus transactions compared to the huge numbers of legal ones. A study using unsupervised learning was able to detect shell companies (i.e. companies that exist solely to launder money) with an overall accuracy of 88% using a combination of a 'k nearest neighbour' clustering algorithm and a 'local outlier factor' Elliot then discussed an ongoing Turingproject (funded by the Turing Accenture Alliance) which is looking at detecting fraud/anti-money laundering with a focus on looking for novel anomalies (unsupervised case), but with the ability to use examples to guide the search (supervised case).

In this project, the team is constructing a new method for detecting fraud using approaches from Network Science, a relatively new academic field in which the area of interest is the patterns of connections between individuals (or nodes). Their approach is to look for deviations from what would be expected (or 'normal') by leveraging recent advances in Network Comparison methods, namely NetEMD. A Network Comparison method measures the similarity between a pair of networks, in NetEMD's case it does so by comparing the shape of the distribution of a statistic over the nodes in the network (e.g. the number of times a node is involved in a triangle, i.e. 3 nodes that all connect to each other). Elliott noted that any network comparison method can be made into an anomaly detection method by combining it with an understanding of what would be expected or what is 'normal'.

Elliott also discussed the application of spectral approaches which summarise global network information. They are advantageous for their scalability and can be combined with NetEMD



or can be used directly (e.g. spectral localisation which looks for spectral features that concentrate on a small number of nodes).

Elliott detailed some early result on synthetic data showing that these approaches can work, but highlighted that it is important both to test this on real data and to build a domain-specific understanding of ‘normal’ which is very important to detect anomalies while minimising the number of false positives and false negatives.

11:20 AM In 2011/12, visual artist **Femke Herregraven** – who has been working on finance for the last 7 or 8 years – was invited to be an artist in residence in the Zuidas (the Amsterdam financial district) and ‘do something with the community’. She asked herself ‘Who are my neighbours?’ and soon found out that the office building was packed with a great number of companies that had very abstract names and were very difficult to reach. And a lot of them didn’t even have a website.

She started investigating these invisible companies, which were clearly shell companies. She published her findings in her book *Geographies of Avoidance*, which shows that some addresses are home to thousands of companies. She then started to investigate how these companies work: why are they here and where’s the money going to? For this purpose she read a very interesting report by Richard Murphy of the Tax Justice Network, in which he reveals where all the money flows between jurisdictions go. One of the destinations appeared to be ‘nowhere’. She also found out about tax treaties as gateways to capital flows with names like ‘double Dutch Irish sandwich’, ‘Mauritian Indian sandwich’ and so on. To simulate these global tax constructions and money flows, Herregraven created the web-based game Taxodus, which challenges the player to evade as many taxes as possible.

Next, Herregraven decided she wanted to know more about the London Metal Exchange, and especially the aluminium market. She signed up as a researcher and was granted access to databases of all warehouses where aluminium is stored. She visited some of them, including the warehouses that were part of the Goldman Sachs scam in which they created scarcity (and thereby an increase in the price) by storing aluminium for a longer period than is allowed. Herregraven finished her story by talking about her contribution to the Panama Papers. Compared to other countries, the Netherlands didn’t have many cases that dealt with individuals or buildings; it was more about structures. To explain these, visualizations were needed. By visualizing these tax schemes, Herregraven enabled us to perceive intangible financial technologies and get a better grasp on its consequences.

11:50 AM Rob van ’t Oever – head of Intelligence within the Security & Integrity Management department of ABN Amro Bank – made a plea for cooperation and partnerships to solve problems and fight financial crimes in the future. He said that a publication like the Panama Papers leads the public, journalists and regulators to assume that the bank knows everything. However, in such an international context with various databases, which don’t always correspond to each other, it’s impossible to understand the problem completely. Therefore, when you work in a global setting, which is usually the case with money laundering and tax avoidance, good cooperation and teamwork are crucial in solving crimes. Van ’t Oever said that he shares knowledge with other experts, for example by inviting someone from the FIOD

(Dutch Fiscal Information and Investigation Service) to work at his department at ABN Amro, and vice versa. And when it concerns the financing of terrorism, ABN works together with the country's Financial Intelligence Unit and other banks. He said that investigating crime from one perspective isn't efficient and won't result in the whole truth, and thus the research should involve expertise from professionals such as regulators, journalists and artists. At the moment it's not good enough, so we have to share knowledge, learn from each other and work together. And focus, because we can't do everything. Moreover, good cooperation doesn't mean that you have meetings all the time; it's more about taking action and putting in the work.

12:05 PM Jonathan Brown – a forensic accountant who leads the forensic team at Control Risks (a specialist risk consultancy) in Europe and Africa and has 20 years of experience in the field – reflected on the history and future of his profession and how it is continuously changing. When Enron, a large tech company, went bankrupt they destroyed a lot of evidence in the 'shred-room' until the regulators stopped them. The investigators were afraid that they would have to close the case. However, around 600,000 of Enron's emails ended up in the public domain. That was the moment investigators started to realize the importance of email; it was very helpful to find out what had happened and how it had happened, because people communicate very indiscreetly when using email. Analysing emails was new and demanded a new method of investigation.

Forensics has become very heavily technology driven, which makes it hard to focus in investigations since 'there's too much data.' Some 90% of the world's data was created in the last two years. And we're always one step behind; for instance, when traders who were investigated realized they were being observed, they started to use a Facebook account and the Messenger function.

But investigative systems get smarter as well; banks file traders' information automatically nowadays on ongoing basis, and when potential misconduct is spotted, they zero the trade immediately. Also software-driven tests exist that look for red-flag transactions in all the financial data that companies get (unfortunately, most companies have awful data; they sometimes don't even know where to find their data) and emails can be analysed by self-learning systems.

Brown said that it is crucial to know what to do with data and to overlap the different layers of information to find unusual patterns, behaviours or payments. The technology constantly changes and thus 'we're always playing catch-up'.

12:20 PM 'Hello. This is John Doe. Interested in data?'

This was the first message that **Bastian Obermayer** received in relation to the Panama Papers. Obermayer is the head of investigations at the *Süddeutsche Zeitung* (SZ), one of Germany's leading newspapers. After getting in contact with the anonymous person, Obermayer started to investigate seven leaked documents that revealed suspicious activities of offshore companies.

John Doe kept on sending more, and more, and in the end there were 2.6 terabytes of leaked documents. Bastian Obermayer and his colleague Frederik Obermaier had to cope with the sea of data and decided to share the information with colleagues in other countries.



Their bosses had not been keen on the idea to begin with, because they were afraid of missing out on the scoop, but not only was there too much to handle, but also the documents were written in various languages and concerned individuals they hardly knew. To make sense of all the data they therefore needed people from different disciplines and of different nationalities. Members of the International Consortium of Investigative Journalists secretly researched the papers for almost a year, after which 109 newspapers, broadcast stations and online media exposed the information simultaneously to create a more significant impact. The leak had a massive effect as it caused various direct actions (the dismissal of two prime ministers and hundreds of investigations), legislative actions (a list of non-cooperative tax havens by the EU) and a change in people's attitudes (demonstrations and public exposure).

13:45 PM 'Municipalities can play a large role in combating crime'

Public prosecutor Anita van Dis-Setz:

Anita van Dis-Setz, addressed the difficulties in combating money laundering. In her view, the police, the public prosecutor's office and local government authorities can tackle this problem only if they work closely together and with a coordinated response.

'Quite often, the media shows news about the investment of dirty money in industries such as the hospitality sector or prostitution, and the large-scale trade in real estate,' said Anita van Dis-Setz. 'Each year, billions of euros of criminal money are laundered in the Netherlands. We don't have an exact figure, but research shows that it amounts to around two to three per cent of our gross domestic product. In monetary terms, this means a sum of between 16 and 18 billion euros is laundered in the Netherlands each year.'

Move swiftly

A criminal uses his money first and foremost to finance new crimes. Van Dis-Setz: 'However, criminal money doesn't just facilitate investments in new criminal projects. A criminal likes to show off his criminal lifestyle and will subsequently invest in our legal economy. Since the criminal money can be used for legitimate purposes in everyday life, money laundering stimulates a repetitious cycle of criminal activities. The district court of Amsterdam once considered in its verdicts that "macho behaviour" by criminals creates the impression, especially among young people, that earning money in a regular way is only for losers. This role-model behaviour is extremely subversive. Therefore, it is absolutely crucial to move swiftly in seizing any ill-gotten gains from these criminals.'

The public prosecutor described the Dutch anti-money laundering strategy: 'It goes without saying that if money is an important motive for crime, then you should take away the gains. This is the obvious first move but, unfortunately, it is easier said than done. Partly because of the lack of good financial police, but for a large part because the dirty money is so well hidden. To launder money, you need other people to set up structures or mechanisms, to purchase real estate, to buy or set up companies, or to make investments abroad. And these are often individuals and companies that play a role in regular economic activities. Thus, a mixture of the illegal and legal worlds emerges quite quickly, and legal structures are used for criminal activities.'

Vigilant

According to Van Dis-Setz, a key priority in the Dutch approach to money laundering is making financial institutions aware of their compliance. 'We receive these cases partly from anti-money laundering supervisors, and partly from our penal cases. If we see, for example, that a criminal buys a car with cash, we will verify whether the car dealer in question has notified the Financial Intelligence Unit. It's also important that all governmental authorities – the tax office, supervisors and particularly the municipalities – remain vigilant. They have to stay alert to all the signals and continue to ask questions about who the beneficial owner is, who or what the source of the money is, and how it is earned. Last but not least in our approach is our intelligence-led money-laundering investigations. Due to our case law or common law system, we can conduct investigations without having to prove the predicate offence. So we start with the information concerning the unexplained wealth.'

Based on Dutch case law (which is analogous to common law), the public prosecutor's office uses a five-step approach in cases where they do not know the predicate offence. 'We begin with a suspicion based on facts and circumstances, also using typologies; indicators, red flags pointing us to money-laundering activities, for instance, the typologies published by the Financial Action Task Force (FATF). Next, we ask the suspect if he can explain where the money came from. Third, his statement has to be concrete and verifiable; the information provided will be investigated by the police. If there is no statement at all, or the statement proves to be inadequate, we bring the case to court. And finally, the court decides.'

Opportunities

The key message that Van Dis-Setz wanted to bring across to her audience is the importance of probing. You must keep asking questions. 'Ask potential investors to be transparent in their means of financing, who the beneficial owner is, and so forth. And if you're not satisfied with the answer, ask more questions. Don't issue any residence permit or licence to do business if an entrepreneur is not transparent. In my view, an effective approach to tackling subversive criminality requires organisation at governmental level – an organised government that in turn uses all the resources and instruments that it has at its disposal. And this means that municipalities can also play a larger role in effectively combatting crime.'

Municipalities also have a role to play when it comes to raising barriers. 'If someone applies for a business licence, it makes sense to keep asking questions about the origin of the money: who is the real source behind this? Who is the beneficial owner? You have to probe, and if you're not happy with the answers, you should turn down the licence application. Money-laundering activities are hard to identify for a relatively simple reason. Organised crime consists of a commercial activity with a financial gain. As regards business such as Hawala banking – banking without a license – we need to receive the right signals. To this end, you need eyes and ears on the streets, throughout the municipality – people who see what's happening in their neighbourhood.'

Cooperation

We can only achieve effective action by working together, Van Dis-Setz concluded. 'On a national level, by cooperating with various governmental bodies and with trusted parties from the private sector. International cooperation is also very important for a successful result. This means that we have to share information, create awareness and meet up in order to discuss this phenomenon. And to uphold integrity within the municipalities, individual politicians and



officials are the people who should primarily bear the responsibility. Honourable office-bearers and elected officials are a prerequisite for gaining civilians' trust within a municipality. I wish you all every success.'

14:00 PM 'Journalism is printing what someone else doesn't want printed; everything else is public relations.' It was with this quotation that **Eric Smit** – founder and editor-in-chief of Follow the Money, a journalist platform founded in 2010 – started his talk.

One of Smit's primary concerns is what he referred to as a 'race to the bottom' regarding how certain countries, particularly the Netherlands, have become tax havens for international corporations through international treaties and attractive financial environments. Smit used an example of how former US presidential nominee Mitt Romney syphoned \$102 million through the Netherlands in 2012 in order to evade taxes. The Paradise/Panama/Lux papers show that the Netherlands is very popular among those who wish to evade taxes: more than half of the Fortune 500 companies use the Netherlands in this way.

Worldwide, only five countries are responsible for canalizing 47% of multinational corporate offshore investments in tax havens. The list is headed by the Netherlands, followed by the UK. The plans to abolish the dividend tax fit in perfectly. No facts are presented, no economic rationale, just the argument that it contributes to a 'more attractive business environment'. Cost: €1.4 billion. We have some rules, too, such as half of the management has to live in the Netherlands, most important ongoing concern decisions have to be taken in the Netherlands, the most important bank accounts have to be Dutch accounts, etc. Most of these services are provided by our trust companies.

Supervision fails, Smit said. There are 212 trust offices with 4380 customers – and the Dutch central bank has only 13 controllers. And the gatekeepers who have to report if something bad happens are the same people who provide the abovementioned services to their clients. So this is a perverse system. Every year, the Dutch central bank criticizes the trust sector for reporting very badly; trust offices report too late or not at all. Also, the abilities of the tax enforcement agency have been undermined: the agency has huge ICT problems and a lot of experienced staff have left thanks to very generous exit packages.

Smit gave some examples of oligarchs/corrupt politicians/organizations laundering their money through the Netherlands very easily, using our tax structures. Like Rostec, a Russian defence corporation that produced the Buk antiaircraft missile with which the MH-17 plane was shot down. The owner of this firm is on an international sanction list and therefore can no longer visit the Netherlands. That means he can't be in the Netherlands when important decisions have to be taken, one of our rules. But nothing is done about it. Indeed, a race to the bottom.

14:15 PM Van Dis started the Q&A (including Van Dis and Smit) by saying that it's a political decision to use our country, our tax laws and our trust firms in the way we do. Prosecutors can only act when something illegal happens. However, trust offices are also gatekeepers in the financial system and they have to obey rules like the 'know your customer' principle, knowing who's the beneficial owner, and so on. And stricter rules are coming; owners have to

be registered for example. Unfortunately, trust offices don't often file unusual transactions, the reason why the 'non-filing action' has started (in collaboration with the FIOD).

Amsterdam's chief Science Officer, Caroline Nevejan, said that she wonders what we, as a municipality, can do about this problem. We are selling out our streets and our living environment, but the rules are made at the national level.

Smit reacted to this by saying it's all about political pressure. The VNO–NCW (Confederation of Netherlands Industry and Employers) lobby is too strong. Politicians are believers; they have no arguments, but believe that our economy is profiting from the current business climate. But in fact it's immoral.

Van Dis pointed to London, where Russian investors now have to answer a lot of questions, for example about the origin of their money, the reasons for their complicated business structures, and so on. Smit referred to business treaties that contain rules that are designed to encourage businesses to come here. These rules make it hard to ask the questions mentioned by Van Dis.

The question is how to react to new phenomena like trading in cryptocurrencies? Van Dis said that cash is still king, but nevertheless the number of crimes involving cryptocurrencies is increasing. To tackle this, prosecutors worked together with the AMLC (Anti-Money Laundering Centre). First it was described how the trade looks like when it's done in a proper way. What kind of percentage is paid as commission, how does the office look like, etc.? Then ten cases were chosen that looked suspicious; they had no office (they worked, for instance, from a coffee shop, using their Wi-Fi to connect to the dark net), asked for huge amounts of commission, used Bitcoin mixers, etc. So, again, questions were asked. Of course, an investigated person isn't obliged to answer because of the presumption of innocence, but if there are suspicions, the person has to answer, otherwise he or she can be convicted of money laundering. The European Court agrees with this method.

Smit emphasized that we need more police staff: 'We're chasing a Ferrari in a Deux-Chevaux.' More staff are always welcome, van Dis agreed, but we also have to share information more often. However, this isn't always possible due to privacy laws. These laws are necessary and important, but why can't governments get the same information that companies can easily buy?

Regulating urban finance

14:25 PM The Italian Mafia – which mainly consists of four big organizations (Ndrangheta, Casa Nostra, Camorra and Sacra Corona Unita) – has a long history of violence and of fighting the state, said **Gian Guido Nobili**, head of the Urban Security and Crime prevention department in the region of Emilia Romagna and nation coordinator of the Italian Forum for Urban Security. Over the years, Italian laws have become more effective in fighting organized crime. Since 1982 it's been possible to seize and confiscate assets owned by the Mafia thanks to the Rognoni-la Torre law (named after the killings of Italian MP Pio la Torre and Carabinieri general, Carlo Alberto Dalla Chiesa).



Taking criminal assets away from criminals is a complex task; such assets can be in the form of money that is transferred through financial channels as well as via various types of real estate (houses, hotels, clubs, restaurants, etc.) or agricultural companies. However, this procedure, albeit complicated and slow (it can take more than ten years), has been more effective than prosecuting and convicting due to the logistical importance of certain assets. In 1992, magistrates Giovanni Falcone and Paolo Borsellino were murdered. This was the start of social action, headed by the organization Libera, an association of social promotion. They collected 1 million signatures with the aim of creating the possibility that confiscated assets could be used for social programmes and be given back to the local community for the purpose of enriching community services, social programs and job opportunities. In 1996 such a law was actually introduced.

Local governments play an important role in managing the assets; it was a big shock especially for the northern regions that many assets were located in their regions: although the Mafia mainly operates from the southern regions, they had invested in real estate, pizzerias and restaurants, mostly in prestigious localities, elsewhere in the country. In the region of Emilia Romagna alone, where 4,4 million people live, there are more than 119 confiscated assets. To plan and programme the reuse of these assets, the local government works together with the University of Bologna.

On land confiscated from criminal organizations, people now produce pasta, olive oil, vegetables and wine, which are sold in Italian supermarkets. This is important because there is profit from these sales and it also is a symbolic act. Buildings and houses are repurposed as shelters, schools, youth centres, centres for refugees, social housing and other civic centres. One building is even used as a local police station.

The local experiences of reusing illicit assets show that legality is not an abstract concept; on the contrary, it is a concrete reality that can create jobs and economic prosperity. It costs money, but it represents an investment in culture, on both a symbolic and a practical level.

14:40 PM Today is also the anniversary of the 1992 Capaci bombings, when magistrate Falcone, his wife and three others were murdered. **Giulia Baruzzo** – coordinator of the European desk of the Libera Association – said that the memory of this tragic event inspires her and others to keep working on the issues discussed here today. The Libera Association is an NGO with a focus on social justice, such as the search for truth and the protection of human rights, and the collective memory of victims. One of Libera's main goals is to change the culture about the Mafia and corruption in Italy. Today, the Libera Association has 20 regional offices, 278 local seats and work together with about 80 international organizations, and 4000 young people in 35 countries participate in it.

One of the things Libera focuses on is the social reuse of confiscated assets; it promotes this method and also helps to realize it. Because Libera collected more than one million signatures, Italian law was changed to make it possible to use confiscated assets for the community. European directives issued in 2014 allowed for the use of such assets in other countries as well. In addition, the European Commission created another platform, the Asset Recovery Office (ARO), whose task is to facilitate cooperation between member states on the tracing

and identification of the proceeds of crime and other property belonging to criminals across Europe. Libera takes part in all ARO meetings. Baruzzo concluded by stating the need for exchange and collaboration between nations at the European level.

14:50 PM Karin Wilschut – senior policy advisor at Amsterdam City Council – focussed in her conference talk on the unique infrastructure of Amsterdam’s compelling city centre, which at the same time conceals vulnerability to criminal activity that is entrenched in its physical space. Wilschut went into the history of Amsterdam as a port city, where ‘sex, drugs, and rock ‘n roll’ became cornerstones of its infrastructure. Pointing to Amsterdam’s red light district as a point of entry into criminal activity, Wilschut presented Amsterdam’s Project 1012 as an effort towards environmental transformation. Project 1012 (named after the area’s postal code), which will end in 2018, has led to a substantial decrease in the number of prostitution windows and other spaces vulnerable to criminal activity, in order to make the quantity more manageable and to repurpose some of the properties to present Amsterdam in a more appealing light. Examples of this transformation include 16 becoming temporary boutiques, and other properties that have been turned into record stores and a radio station.

Wilschut presented some aims of and background to the project and pointed at complicating factors, such as the growing tourist influx in the city centre area. She also spoke about the possibilities of and restraints on the administrative instruments that are used in repurposing criminal spaces as cultural spaces and social centres. Wilschut said that she recognizes the importance of innovative governmental instruments; PPS constructions with property owners and housing associations and engagement of the community in the administrative approach of undermining structures in the city. She also discussed the possible impact of data-driven projects in recognizing areas and locations where the abovementioned instruments and policies should be used to protect the safety and integrity of the city. These methods still need to be refined for the future, but there is promise in what can be achieved.

15:00 PM Jonas Hult – chief Safety and Security advisor, city of Malmö, Sweden – stated that municipalities have a mixed bag of challenges to face, one of them being the fact that the interest of the national government is not the same as the interest of municipalities. Take for instance the issue of attracting risk capitalists because of the idea that they bring jobs to the country.

Hult gave an example of a Norwegian real estate company that bought a couple of blocks of houses in an area with low employment, low education and social instability. The management of the real estate went down and opened up a black market for selling contracts for housing. The next buyer started to renovate the houses, but the criminals who were involved in the black market selling came after them and even bombed their offices. Also, Hult continued, we have an international company who knows nothing about the local situation and we as a municipality have no say in matters, but we have to deal with the consequences.

The same applies to IKEA. Although IKEA’s headquarters is in Malmö, it is owned by a foundation registered in the Netherlands. The only contact that officials in Sweden have with IKEA are with the city planners responsible for the expansion of its buildings. These examples are indicative of what Hult refers to as ‘global risk capitalism’.



Moreover, a problem doesn't exist until it reaches the capital. An example is the migration crisis in 2015: there were thousands of refugees in Malmö, but the government only reacted when refugees started to arrive at Stockholm railway station.

To solve problems, Hult said, we need, amongst others, two things: data and 'co-action'. To start with we have to collect, analyse and disseminate data. Everybody who works for the city of Malmö needs to know crucial facts like the average age and percentage of migrants and so on. Hult further emphasized that we need co-action. If there's no co-action, Hult is not in. In his view, cooperating and coordinating only means setting up the rules and pinpointing who does what.

15:10 PM Under the guidance of researchers at Oxford and Harvard universities, **Stefanie Vermeul** – policy advisor, city of Rotterdam – and **Loes van der Wees** – senior public prosecutor from the National Programme Rotterdam-Zuid – presented Fieldlab. Fieldlab is a collaboration between civil servants to solve a 'wicked problem', namely a problem that conventional methods cannot solve. The wicked problem they worked on was the 'dark money' flowing around in the area of Rotterdam-Zuid. In this poor area, large sums of money were found. An analysis showed that €53,000 worth of suspicious transactions were reported per day in this area.

In the opinion of the organizations involved (police, customs, public prosecutor, tax administration, Chamber of Commerce and the municipality of Rotterdam), acting on this wicked problem was important because a second, illegal economy is growing, the integrity of the financial system and the government is at stake, and last but not least, dirty money is an attractive option for young people.

The aim of the project was not only to stop illegal activities and to create a more balanced street scene, but also to raise awareness. It was therefore very important to involve the media. The project was particularly interested in money remittance offices because they lend themselves to money laundering activities. Representatives of all the abovementioned organizations visited all the money transfer offices on the same day. They discovered illegal gambling, the sale of illegal alcohol, undeclared workers, counterfeit money, and so on. The action was successful because in addition to detecting these crimes, they got a lot of attention (partly negative from the sector itself, of course). The sector was invited to join the project; as a result of this, offices stopped collaborating with bad agencies, some offices were closed and no new offices may be opened in the particular streets. At the moment, only 10 of the 19 offices in the streets are still open and this number may decrease because the project is still going on.

This event served to create a sense of urgency and draw national attention to the role of money remittance offices in poorer areas in the Netherlands and inspired more collaboration between authorities and companies involved.

The future of governance

15:50 PM In 1978, **John Christensen** – chair of the board and director of Tax Justice Network, filmmaker, campaigner and whistle-blower, and former economic advisor to the government

of Jersey, , the Channel Islands – decided to look at the big picture of how globalization was enabling illicit financial flows. Years later, in 2003, he co-funded Tax Justice Network (TJN), a global network of researchers and practising professionals working with advocacy and campaigning professionals to remedy financial market failures, promote just tax policies and tackle the harm caused by tax havens.

The Luxembourg Leaks and the Panama and Paradise papers demonstrated that offshore companies are often used to hide and disguise illegal deals between governments and companies, and behind this secrecy there is almost always knowledge of illegality among the involved experts. Poor drafted laws and weak provisions for international exchange of information have corrupted whole professions, including legal professions, accounting professions, banks and so on. For this reason, whistle-blowers play a crucial role in exposing known and trusted companies that are engaged in illegal activities.

According to Christensen, that the system enables illicit financial flows is partly down to some utopian thinkers like Buchanan and Hayek. These economists believed the market had to be totally liberalized because that would lead to much better outcomes, also concerning social matters. This thinking shaped our society from the 1970s, leading to the wholesale liberalization and deregulation of the whole market, of what is known as globalization. The question is, do we want a similar utopian experiment with cryptocurrencies – an experiment that, in the words of Christensen, is ‘led by a bunch of anarcho programmers who are influenced by the ultra-right libertarians of California’? From Christensen’s perspective, the rise of cryptocurrencies makes money prone to laundering and tax evasion activities. The contemporary financial climate combined with the popularity of cryptocurrencies enables people to flout or undermine laws and has created a situation similar to that in offshore tax havens. The ease with which identities can be hidden or disguised behind technical equipment, opens the doors to the creation of a criminal environment. To counter this, it is deemed important to discuss the issue from the start, as well as seeking answers how best to govern these new payments.

In the case of Bitcoin, financial intelligence units (FIUs) and investigators are advised to look at the important areas: online gambling and mixed services. In these areas, the weaknesses should be investigated and tackled. Furthermore, financial crime investigators should share their experiences and identify and adopt current best practices and support countries that are setting up anti-money laundering guidelines from scratch.

16:05 PM Reinier Pollmann – programme manager Innovation & Fintech at AFM (the Dutch Authority for the Financial Markets) – specified the main goal of AFM: fostering a fair and efficient market. He added that people have to understand the financial products they use. In traditional financial markets, three parties are involved: the investor, the intermediary (institutional) and the companies issuing securities. The intermediaries help companies to issue securities on the one hand and help investors to understand the typical risks associated with their investment on the other hand. However, the arrival of cryptocurrencies has changed the process into an activity involving only two parties. In initial coin offerings (ICOs), money is brought to the market directly by investors.



Supervision is a challenge. Cryptocurrencies are currently not classified as securities, so they fall outside of the remit of market supervision. And when it comes to ordinary bonds and shares, pump and dump schemes are forbidden, and front running and market manipulation are not allowed. However, these things are mainstream in cryptocurrencies. Additionally, all ICOs need to fall under general regulation and adhere to the same rules as other companies. Traditional intermediaries are being replaced by new types of advisors and consulting firms, promoting ICOs to investors. They're mainly selling hope instead of giving proper advice, resulting in the loss of the duty of care that intermediaries usually have. Tackling these practices is complicated for the AFM, however, because of the way the intermediaries are structured. Referring to Christensen's comparison with offshore illegality, parts of criminal activities happen outside the Dutch jurisdiction and become a matter of global governance. However, essential questions are still unanswered, namely: should companies issuing security in cryptocurrency be regulated? How can we ensure the intermediary function in investments? Supervisors like the AFM all share the same view on what should be done, yet what is lacking is speed and leadership within the regulating community. Continuous innovation demands fast reactions and, in the end, cryptocurrencies should be regulated just like ordinary payment systems. The roles of public entities in this process should be acknowledged.

16:20 PM Hennie Verbeek – head of the Dutch Financial Intelligence Unit (FIU) – said that she clearly recognizes the public duty of regulation. Verbeek talked about a Harvard case study during which the participants heard stories about the owners of shops, pubs or restaurants being pressured to sell their businesses for a huge amount of money. It also appeared during this Harvard case study that in hospitality, for instance, private loans are often used to finance the business. Yet the source is often unknown, opening the door to criminal investments. As a result, the license application process was being examined and it appeared that mainly the person who was going to run the business was screened. That shifted to: in what way is the business financed? It's about asking questions.

To combat issues like these, public and private authorities should collaborate and exchange data, playing their own roles. For instance, disapproval of loans happens through the identification of sources that are not transparent, yet is only possible with information provided by banks and accountants. The FIU receives, analyses and disseminates information. It uses and exchanges information at both the national and the international level, contributing to combatting crime both nationally and globally. The FIU receives reports from the private sector (gatekeepers are obliged to report to the FIU if they see something unusual), analyses these and adds value by combining data with information from other sources (e.g. the police, real estate companies). The outcome of this analysis is disseminated to law enforcement agencies if needed, so they can act. The FIU also analyses big data so it's able to predict new trends. In accordance with John Christensen, Verbeek advocated agile cooperation and the expansion of partnerships (public–public, private–public and private–private). New players like cryptocurrency exchange platforms, exchange offices and the GAFA companies (i.e. Google, Apple, Facebook and Amazon) have to be regulated, Verbeek said. However, that will take some time.

WORKSHOP WEDNESDAY MAY 23RD

BITCOIN ATMS: A STUDY ON THE VULNERABILITY OF CRIMINAL EXPLOITATION

Tom van Engers en Irvan Smit

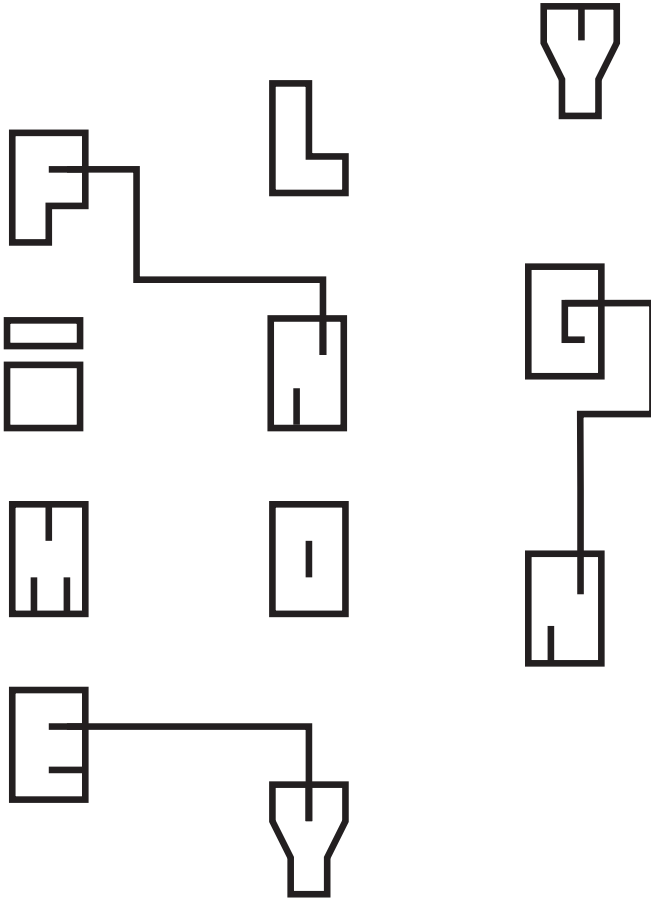
Bitcoin ATMs (BTMs) are a relatively new phenomenon. Four can be found in Amsterdam—two in a casino, one in a café, and one in a toyshop. BTMs allow their users to change currencies into bitcoins, and vice versa. Various legal issues may be relevant depending on how we conceptualize this phenomenon. One could argue that BTMs are used for banking activities and consequently regulations applying to banks should also apply to the organizations that exploit BTMs, for example the requirement to hold a banking license, which is currently not the case. One could also conceptualize BTMs as gambling machines, given the volatile character of bitcoins, in which case the law on gambling would be applicable and the organization exploiting them would need a permit and the users would be subject to gambling tax. Other conceptualizations would also be possible. Before taking a stance on the phenomenon, we first need to understand it. Different authors have suggested that bitcoins can be and are used for criminal transactions, including money laundering and illicit transactions on the dark web. In our small study, we wanted to unravel the mystery, understand the business model of the organizations exploiting BTMs, the motives of users of BTMs, and the perspectives of law enforcement organizations on this phenomenon. In the qualitative study, interviews with experts from banks—including the Dutch National Bank—law enforcement, and users were conducted.

The main stakeholders linked to BTMs are the producers, the operators, and the organizations that place the BTMs at the latter's locations (proprietors). Regarding the municipality of Amsterdam, BGST is the operator and their machines are produced by General Bytes. Three of the four machines are 'two-way' machines, meaning that it possible to exchange cash for crypto, and vice versa. Moreover, there are several strategies that an operator can use in order to sell and buy cryptocurrencies, but the most common practice is to directly sell and buy from a linked exchange, such as Coinbase, by API access.

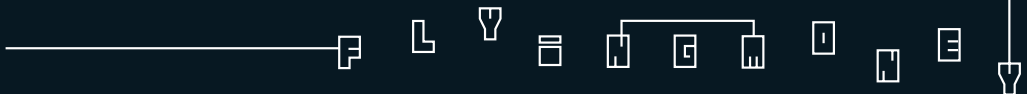


The interviews led to several findings. The first is that as the BTMs are unregulated, the current operators manage their own know-your-customer (KYC) procedure transaction limits and their cash liquidity in the machines. Furthermore, to a certain extent it is possible to perform anonymous transactions. The operators can decide how to configure the hourly, daily, and monthly limits on the machine. The BTM operators monitor the anonymous transactions as a form of self-regulation, as there are no formal reporting requirements. According to the interview with BGST, their revenue model is based on receiving a commission for the use of the machine; this varies between 7 and 10% per transaction. Additionally, the proprietor of the location where the BTM is installed receives a percentage of this commission; this varies according to the agreement between the BTM operator and the proprietor.

The BTM is identified as a gateway to fiat money and cryptocurrencies, thus as a bridge between the centrally coordinated money market and a distributed money market. At present, illicit transactions are possible, since there is a lack of regulation regarding the KYC procedure, transaction limits, and BTM operator screening. Yet, there are practical barriers that prevent large transactions, such as the amount of cash in the machine and the operator's self-regulation, which is aimed at preventing suspicion that the operator is facilitating money laundering or other criminal acts. The ongoing discussion on how to conceptualize the cryptocurrency phenomenon also has an impact on the implementation of countermeasures. Nevertheless, the operators of BTMs want to break out of the 'grey area' in order to run a legitimate business. The current challenge for regulators is to cooperate with parties that operate gateways, such as BTMs. This should lead to operators having reporting requirements, clarity about the machine's transactions, and responsibility and accountability for an enhanced and proper client screening.



BACKGROUND ARTICLES
INVESTIGATING ILLICIT
FINANCIAL FLOWS
IN THE CITY



FLYING MONEY: ORGANIZED CRIME AND THE NEW DIGITAL MONEY

THE ROLE OF LOCAL AUTHORITIES IN TACKLING ILLICIT FINANCIAL FLOWS IN A DYNAMIC FINANCIAL ENVIRONMENT

Geert Lovink

'Wasting money puts you in a real party mood.' - Andy Warhol

Flying Money asks the question how local authorities can position themselves in a dynamic financial environment, considering their specific role in tackling illicit financial flows. Global developments in digital currencies and flows of money are unfolding at breakneck speed. Blockchain, cryptocurrencies and the emergence of parallel banking systems such as mobile money, Hawala and local currencies impact the ideas in society about the future of money. What happens when central banks lose the monopoly on who defines what money is? Once money is digitized and stored in private electronic wallets, the national currency is only one of many forms of value storage and exchange systems. This turbulent period of transition also expands the playing field of organized crime—and this is where the Flying Money focus will be.

As more of us rely on electronic rather than tangible forms of money on a day-to-day basis, and the world's financial systems appear to become more and more complex, many are left to ponder who's in charge of the new forms of money and the value and stability of these exchange systems. In this regard it is important to understand what opportunities organized crime has. Cash is often seen as murky business, a way for criminals to launder money, and digital money can seem like an attractive solution to this problem. The association of cryptocurrencies with pump & dump schemes, rampant internal trading, its use in ransomware and dark web platforms like the Silk Road marketplace shows the cracks in this way of thinking.

Speculation with crypto-currencies is no accident, or sign of a projected high demand in the near future but a built-in feature. As Nathaniel Popper noticed in his 2014 book *Digital Gold, the Untold Story of Bitcoin*: 'The notion of Bitcoiners around the world sitting on their private keys and waiting to become rich begged the question of the intrinsic value of these digital files. What were all these locked-up virtual coins really worth if no one was doing anything with them?'²⁴ Summing up the Bitcoins first five years, Popper states that although the virtual current attracted talented people, 'it was still almost entirely used for speculation, gambling and drug dealing.' The software architecture encourage people to hold on their Bitcoins rather spend them. Hoarding is the feature, not a bug. This is why the crypto-currencies are

24 Nathaniel Popper, *Digital Gold: The Untold Story of Bitcoin*, New York, NY: Harper, 2015.

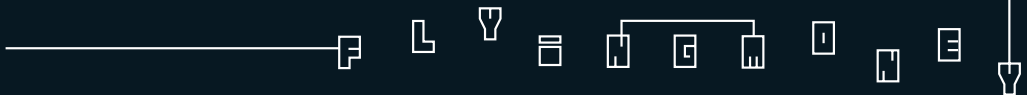
considered the new gold, not the new dollar. This makes them an ideal medium to store value, apparently out of sight of authorities.

Since the 2008 global financial crisis many citizens have lost trust in traditional institutions in the financial sector. New players are taking up space in this field. How can governments deal with such radical societal shifts? What should its relation with the platform economy giants be? Do we have to wait for a severe crash for regulators to step in? How can the new playing field be monitored for criminal activity? How does the future of democratized digital money forms look like? Will it be state-issued, or will globalization play its part in this sphere as well? What are the consequences of a cashless society?

As money is man-made, it can be reinvented to positively influence relations in the social, environmental and economic domain, to better serve our individual and collective needs. Community currencies sit between a loyalty value system that a local shop might organize on one side, and a currency like the euro on the other side. While *Makkies* are used in a specific neighborhood of Amsterdam, a currency like the *Brixton Pound* has created a large community and funding structures around itself. What is the value of local currencies, and what does their existence make possible for their users and is larger oversight needed?

Experimental means of payment have different names on a national and international level. They may be called virtual, digital, alternative, or cryptocurrencies, money or coins. The European Banking Authority defines virtual currencies as a digital representation of value that is neither issued by a central bank or public authority, nor necessarily attached to a legal tender. Despite not being backed by the authority of a state, virtual currencies are used by many individuals, either as medium of exchange or investment capacity, and accepted by an increasing amount of businesses. What are the cultures and communities like that have sprung up around the various virtual currencies? What are the reasons for investing in a highly volatile and unregulated currency, besides the prospect of big returns? What are the societal uses of blockchain-based organizational structures outside of the speculative realm and how should governments handle the pseudonymous nature of accounting on the blockchain?

There's good news and bad news for forensic investigators doing blockchain transactional analysis. The good news is that *Bitcoin's* blockchain is a publicly-accessible ledger containing all the transactions ever conducted in Bitcoin since its inception in January of 2009. The bad news is the pseudonymous nature of those transactions, which don't refer to names or email addresses. Instead, they use Bitcoin addresses, which look like this: 1yXfRNBg9E2URDEcrdZx5R1ZPxTcUJGTH. The challenge for forensic investigators, as usual, is to identify the person behind the keyboard, which may be accomplished with a mixture of traditional investigative and digital forensic techniques. Ultimately, nothing can be kept secret. We need to look at anonymity and the cracking of crypto code as part of an arms race. With most authorities still ignorant about the related issues, organized crime uses the temporal confusion, knowledge deficit and lack of competence to use crypto currencies for tax evasion purposes, drugs deals and illegal real estate deals—knowing that ultimately the secret code can, and will be, cracked. If there is no competent cybercrime research staff that can deal with the overwhelming amount of cases, little can be done to fight organized crime. Gathering 'big' data alone will not do the job.



Tax-evasion and crypto-taxation

In April 2016 the *Panama Papers* uncovered some of the most incriminating evidence against an alleged international tax-evasion scheme ever. Over 150 politicians and their close associates have been linked to hundreds of thousands of offshore shell companies, reportedly used as tax havens to shield billions of dollars. The 2017 *Paradise Papers* served as an equally big sequel to the offshore investment story. Instead of criminal schemes of individuals that outright break the law, the backbone of these tax evasions are the loopholes of government regulations. The current scale of acquisitions in real estate indicate a systematic transformation in the pattern of land ownership in cities, which has deep and significant implications for equity, democracy and rights. What used to be small and/or in public hands is becoming large and private—a transition that is often done with active local government support. By changing the way value is digitally stored and exchanged, blockchain technology is altering the way real estate is recorded, transferred, financed and managed globally. This technology has the potential to improve compliance, reduce costs, and enhance efficiency and speed while strengthening anti-money laundering standards in the financial system. But will it?

Flying Money intends to address the governance issue. On the one hand this is an issue of regulation, EU-wide and ultimately on a global level. On the other, there is the concrete issue of local and national taxation. The discussion about the relation between crypto-currencies and the nation state boils down to the following choice: buy cryptos to speculate, pay tax; buy them to use, no tax. As countries make steps towards digital tax reporting, this paves the way for blockchain technology to offer a more sophisticated level of transparency, security, and immediacy. Blockchain and smart contracts in particular can change the way we handle taxes completely. This by implementing real time tax, meaning real time as the payment or charge is automatically done in every incoming and outgoing single transaction.

Governing decentralized financial flows

No one, central organisation or government is in charge of the internet, and its governance has taken shape over the decades in the form of decentralised global network of organisations (like ICANN, IETF, IGF etc.). Even if pundits like Don and Alex Tapscott (authors of *Blockchain Revolution*²⁵) consider blockchain as internet 2.0, this networked system of governance has not taken on the governance of blockchain technology. What does “internet 2.0” actually mean? Internet without governance? Hardly. The world of money creation is tough. What else do you expect? Today, computer code is literary producing money, supposedly out of nothing (we’re not talking about the unsustainable energy waste here). This is a world of difference compared to the innocent not-of-this-world attitude of many computer science engineers. Who will step in there and define the terms? Liberal ideas such as the “multi-stakeholder approach” and human rights are completely absent in the blockchain discourse that has so far dominated by libertarian anarcho-capitalists. Welcome to the Wild West.

Both internal and external governance of the crypto currencies is a complete mess, to put it mild terms. Not even the most basic rules and ways of working as practiced in the internet governance and free & open source contexts do not apply. There is no running code and

25 Don Tapscott & Alex Tapscott, *Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies Is Changing the World*, New York, NY: Portfolio/Penguin, 2016.

consensus as in internet 1.0. The rapidly expanding internet fintech universe of the past decade was neither claimed by traditional internet governance nor by banks or international bodies such as Swift. In the midst of the confusion national regulation proposal pops up everywhere by financial market regulators. The current hacking cases are immense in terms of stolen money, with crypto-currencies fluctuation wildly. Will the predominantly young crypto investors be bailed out? Unlikely.

It has been 10 years since the last financial crisis, and some have already predicted that the next one is near. Whenever it comes, it will likely have its roots in computer code and algorithms, operating from somewhere in the cloud, not the old school stock exchanges such as Wall Street. Financial technology (or 'fintech') markets are populated by small startup companies, the exact opposite of the large, institutionalized Wall Street banks that have for so long dominated finance. These new companies have brought great benefits for investors and consumers. By automating decision-making and reducing the costs of transactions, fintech has greased the wheels of finance, making it faster and more efficient. It has also broadened access to capital to new and underserved groups, making finance more democratic than it has ever been.

Is Wall Street no longer the future of finance? Will Silicon Valley players such as Apple and Amazon at some point take over? Or rather Alibaba? A lot of questions do come up concerning the monetization and sale of personal financial data. How will digital money be integrated with content? Over the past 20 years online services have been strictly separated from payment systems that were mostly controlled by traditional bank and credit card companies. What will happen when money and data are seamlessly integrated? Who will the new intermediates? Regulations how to use data and governance of fintech markets will be vital to tackle illicit financial flows. Additionally, while fintech startups swoop in with the latest innovation, attempting to disrupt yet another sector, governments need to be ready to respond to new business models and concerns around privacy. Are people still primarily citizens of a country, or have governments ceded this authority to something like the networked nation?

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References

Popper, Nathaniel. *Digital Gold: The Untold Story of Bitcoin*, New York, NY: Harper, 2015.
Tapscott, Don, & Alex Tapscott. *Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies Is Changing the World*, New York, NY: Portfolio/Penguin, 2016.



THE SHADY SIDE OF DUTCH FINANCE UNDERMINING OR 'SUBVERSIVE' CRIME IN THE NETHERLANDS

Pieter Tops and Jan Tromp

The Netherlands has a hidden side; a shady side, criminal in nature and embedded in towns and villages, that is developing beyond the reach and out of sight of the government. It is a phenomenon captured in the concept of undermining or 'subversive' crime, which we describe in the book *De achterkant van Nederland* (The shady side of the Netherlands).²⁶ This form of crime is insidiously gaining major influence in the social and economic domain. It undermines the foundations of the constitutional state and thereby the security and integrity of society; it rides roughshod over honest economic transactions, undermines the educational climate, erodes positive policy and threatens social integrity.

Subversive crime is not easy to delineate, not least because it extends over many activities and businesses, and it is mobile. Wherever a lot of money is to be made, the phenomenon is almost always to be found. It involves the control of illegal markets, or extortion and large-scale forms of fraud, including the misuse of public facilities. Subversive crime is organised crime *close at hand*. It concerns the social effects of organised criminality. Subversive crime is merged with and embedded in the daily lives of many 'ordinary' people in all kinds of ways. It can become 'dissolved' in them, as it were. This creates a context for the acceptance of criminal behaviour, which adds to its appeal. For some people, it is better to be protected by criminals than be under, what is often the strict and impersonal supervision of official bodies. Even though the things they do are sometimes simply beyond the pale, trust is invested in criminals who are known as loyal neighbourhood residents or family members.

Subversive crime is crime that is also a particular way of life; one that is wayward and often vicious, too. The message is that people want to determine the social order for themselves: 'don't mess with us, we're in charge here.' In this way, the phenomenon of subversive crime is also an expression of a certain resistance among parts of the lower and middle classes in society. They feel that they are more likely to be saddled with problems such as the reception of refugees, mediocre education and unemployment than the upper classes. They see that members of the upper classes are often very good at managing to look after themselves. Not infrequently, they are treated unpleasantly by an increasingly callous and abstract government bureaucracy. What's more, they constantly hear from government that they should take more responsibility for themselves and become more independent. With tough and not infrequently successful resistance to government interventions, they create the feeling that they're doing something and can take a stand. In a certain sense, this is their own interpretation of the core doctrine of (neo-) liberal society: that of the self-reliant individual.

It would be unfair to see association with the criminal world – to whatever degree of intensity – merely as a problem of deprivation or a parenting issue. This is by no means always the case. Deciding to go for a criminal career can also be a conscious choice. Some make this choice on the grounds that it is more appealing than the option of climbing the social ladder via school and a regular job; crime is also a way of making oneself count. For others, it is above all an easy way to make good money or escape personal problems. Sometimes a person's naivety is exploited, too, something that we sometimes see in the case of cannabis farms or with schoolchildren; or with government facilities such as Personal Budgets, with which large sums of money can be made, including by criminal gangs, on the back of weak individuals.

The economic and social appeal of the criminal world only seems to have intensified in recent years. People who are struggling, such as mothers on benefits, groups of young people, marginal companies and farmers, see participating in the criminal world as a way of keeping their heads above water. For others, it is an opportunity to make a relatively large amount of money quickly. The distinction between the 'legal world' and the 'underworld' is too unrefined to capture this; the actual situation is a fluid reality in which looking the other way, taking a cut, lending a helping hand and making big bucks are connected and intertwined in all kinds of ways. Socially, there is a great difference between the hangers-on and the hardened criminals with their liquidations, who threaten the constitutional state and perpetuate a fairly ruthless culture of settling scores. Although these worlds – those of the hard core and the groups that orbit it – can quickly merge into one another, it would be unfair to lump everyone together. For the hard core, there is a need for a robust repertoire of repressive measures (and these still need further development); for the orbiting groups, it would be a tragic misunderstanding if only these were to be used. As we put it in the book: if repression alone is used to tackle a problem that also has an important social dimension, this will lead to a widening of the gap with more well-off citizens in society. It drives the less privileged deeper into social isolation, as has happened in the suburbs of Paris.

Subversive and organised crime pose a threat to the government, although it does not always take the form of direct intimidation. Corruption undoubtedly takes place – see below – and there are also several cases of infiltration, usually via front men. Probably much more important are the cases that we describe here as collusion, the imperceptible merging of legal and illegal interests.²⁷ Such cases can concern that run-down part of town that everyone's now rushing to invest in; the football club that's been promoted three years in a row, thanks to a rich benefactor; or the music festival that can now go ahead, following a substantial contribution from a sponsor. There are many examples. Many cases of this kind involve money that has been obtained via criminal activities, and they can provoke impassioned debate within an official organisation, a City Executive or a city council. Why come down hard on a football club if it was your sports funding cuts that got it into trouble in the first place? This can lead to tough and uncomfortable discussions in local political arenas.

27 G.A.A.J. van den Heuvel, *Collusie Tussen Overheid en Bedrijf: Een Vergeten Hoofdstuk uit de Organisatiecriminologie*, Maastricht: Universiteit Maastricht (speech), 1998.



Financial appeal

Subversive crime has many manifestations; they include human trafficking and labour exploitation, organ trafficking, environmental crime, arms trafficking, illegal gambling and healthcare fraud. Organised criminals usually succeed in making a lot of money from all of these activities. In the Netherlands, however, drugs production and trafficking are the engine of the criminal system, not least due to the huge sums of money that circulate in that world. When we add up the turnover from cannabis, synthetic drugs and the trade in cocaine, in the Netherlands we are undoubtedly talking about a billion-euro industry.

The extraordinary thing is that we don't know precisely how much money is involved and where it is spent. Neither are we very good at confiscating a substantial part of this dirty money, despite the widening of the legislative possibilities (seizure laws, the introduction of 'unexplained wealth' orders, the duty to report unusual and suspicious transactions) and despite the generally accepted basic principle that one should hit criminals where it 'really, really hurts' – namely, in their finances.²⁸

What do criminals spend their money on and what social implications does this have? It is generally assumed that there are three broad forms of expenditure: first, on maintaining the criminal activities themselves; second, on the good life (consumption-related spending); and third, on the long-term investment of criminal assets, which also allows criminals to establish a position in normal social intercourse. To get an initial idea of the overall picture, let us look at these three spending patterns and find out how this money can end up in an urban society such as Amsterdam.

The business of crime itself

Criminal activities are not free; they come with costs attached. In the first place, there is the production itself: one needs production sites, raw materials, accomplices, facilitators, etc. Such costs can vary. It is not prohibitively expensive to set up a small cannabis farm, but someone who buys up a shipment of cocaine in South America will easily need hundreds of millions of dollars or euros. When it comes to these kinds of amounts, criminals have to save or work in partnership with other wealthy parties.

Accomplices and employees are needed to organise the production and the trade. These are sometimes low-value activities, such as dumping drugs waste; the executors receive a few hundred euros for this, at most a few thousand. Good 'cooks' or experienced drugs-makers can easily earn a great deal more. We know of stories of cooks who can rake in around 10,000 euros in a single weekend.

Aside from the production system, a lot of money is also made in distribution. This can involve organising micro-dealing systems, using schoolchildren for example. The latter earn 600 to 700 euros a time for what are essentially small services, such as transporting a consignment of drugs from one city to another, or taking care of a consignment.

The really serious money is made in the international distribution system, and the business model is spectacular. For cocaine, it is calculated that a kilo of dried coca leaves will net the producing farmer in Latin America around 800 dollars. By the time the stuff leaves the continent as cocaine powder, the price per kilo has risen to 2,400 dollars. On arrival in Los

28 Edwin Kruisbergen, *Combating Organized Crime: A Study on Undercover Policing and the Follow-the-Money Strategy*, Amsterdam: Vrije Universiteit (PhD thesis), 2017.

Angeles, the price comes to 19,000 dollars, and it is finally sold on the street (cut with other substances) for 122,000 dollars per kilo.²⁹

The large sums of money that are available in the illegal world leave officials in public administration susceptible to corruption. It is known that customs officials working at the Port of Rotterdam used their key position to allow containers of cocaine through in exchange for a huge amount of money. Within the police world, moles have operated who leak crucial information to friendly contacts from the criminal scene. There are also examples of corruption in local government, such as the sale of personal data from public registers, bargaining with permits, or turning a blind eye to the delivery of drugs waste (from cannabis) in return for payment.

Consumption-related spending

The distinction between spending to maintain the criminal system and spending on consumption is not always clear-cut. Some chemicals, for example, can be bought in regular shops because they are also used for all kinds of home, garden and kitchen-related activities. Or take the example of the special lamps that are needed on cannabis farms: a company like Philips has profited substantially from this for years. It is useful to have a rental car for criminal activities, rather than use one's own. Rental cars provide a certain degree of anonymity. Until recently, a city like Tilburg was home to a large number of car rental companies; many more than could be profitable in a city of this size. When the government shone a spotlight on the industry, more than ten of the car rental companies disappeared in a short period.

Research shows that several years ago, around 2,500 people in Tilburg and the surrounding area were actively involved in cannabis production. The turnover from cannabis was estimated at around 800 million euros. Criminals and their accomplices spend part of their money directly on 'conspicuous consumption,' which adds significantly to their and their associates' enjoyment of life. They have to be more careful now than they were in the past; overly conspicuous spending, such as buying expensive cars, has to be reported as possibly suspicious transactions. Not that this always happens, but it does induce a degree of restraint. In principle, all lines of business where considerable sums can still be paid in cash are attractive: expensive clothes shops, restaurants, travel agencies, furniture stores, kitchen companies, etc., etc. This is a crucial source of income for these sectors, certainly in times of economic crisis. Take the example of that large hotel in Amsterdam where someone – we are referring to 2016 – booked a party for forty people. The bill came to 20,000 euros and was settled that same evening; in cash.³⁰

Long-term investments

Finally, part of the dirty money is used to make long-term investments in the Netherlands or beyond (especially in Turkey, Morocco and Southern Spain). Real estate and, more particularly, the trade in real estate, lends itself to the long-term and profitable investment of dirty/criminal money.³¹ Amsterdam's police force, for example, recently warned that criminals would invest

29 B. Kilmer, & P. Reuter, 'Prime Numbers: Doped. The Disaster Drugs: Heroin and Cocaine', *Foreign Policy*, 16 October 2009, <https://foreignpolicy.com/2009/10/16/prime-numbers-doped/>.

30 Pieter Tops & Jan Tromp, *De Achterkant van Nederland: Hoe Onder- en Bovenwereld Verstregeld Raken*, Amsterdam: Balans, 2017.

31 Projectgroep Emergo, *De Gezamenlijke Aanpak van de Zware (Georganiseerde) Misdaad in het Hart van Amsterdam*, Amsterdam: Uitgeverij Boom, 2011.



in the construction of new neighbourhoods in order to launder (drugs) money.³²

A report by Unger from 2006 estimates that 18.5 billion euros are laundered in the Netherlands every year, and that investing in real estate is one of the most important channels. However there remains much uncertainty, about precisely how much and how this is done. Further research, including by Unger, but also by Ferwerda and by the WODC, has filled in certain parts of the overall picture. 'Real estate gives organised crime a footing in society. That is the danger,' concludes Ferwerda, based on his research: 'It is through real estate that the methods of organised crime, such as extortion, find their way into the legal business world'.³³ The WODC study showed that many chief suspects in criminal investigations into real estate fraud operate primarily from a legal position: they are traders in real property, earn their living in the financial-administrative world, or act as notaries.³⁴

The criminal money that is invested in real property in the Netherlands does not come from Dutch criminals alone. There are serious indications that foreign criminals are also active in this sector in the Netherlands. One publicly known case is that of the struggle between Amsterdam City Council and the Israeli Barazani family (the 'kosher mafia'), which owned a number of properties on and around Damrak. In 2009, the permits for four of the family's catering businesses were withdrawn; they had failed a probity screening test (under 'BIBOB' legislation) and were suspected of laundering criminal money.³⁵ The Stadsgoed housing corporation later bought up a large part of the family's buildings as part of the '1012 project'. The family subsequently featured in the headlines again, because they were the target in Israel of bomb attacks perpetrated by serious criminals.³⁶

How is dirty money made by Dutch criminals, often by means of drugs trafficking or production, actually laundered? In the first place, it remains relatively straightforward to smuggle cash out of the Netherlands and then launder it in other countries. This can be done easily by car, truck or plane. Cars and trucks drive back and forth between the Netherlands and Southern Europe and North Africa, smuggling money in all kinds of ways, often in specially-built-in compartments. A discovery is made every now and then, but these are tiny amounts of the total sum of money, meaning that it is a risk worth taking. There are also countries where you can bring in large quantities of cash relatively easily (and legally) by plane. You only need to get around the barrier of Dutch customs control, but it is possible to develop a knack for this (whether or not you use bribery).

Then there are the money flows that go via the so-called 'underground banking' network (also known as hawala banking). Large quantities of dirty money from the Netherlands can be made 'legal' in other countries (Dubai is a much-used destination). Either directly or via a detour in the form of one of the well-known offshore constructions, these money flows can then be channelled back to the Netherlands and invested in the legal economy. Financial advisors

32 Maarten van Dun & Paul Vugts, 'Stad ideaal voor drugsdrameel', *Het Parool*, 18 April 2018.

33 Marc van den Eerenbeemt, 'Vastgoed Geeft de Misdaad een Basis', *De Volkskrant*, 13 March 2007, <https://www.volkskrant.nl/nieuws-achtergrond/vastgoed-geeft-de-misdaad-een-basis--b34fff54/>.

34 B. van Gestel et al., *Vastgoed & Fout: Een Analyse van Twaalf Strafrechtelijke Opsporingsonderzoek naar Illegale en Criminele Praktijken in de Woningsector*, Den Haag: WODC, 2008.

35 'Amsterdam sluit vier hotels Damrak', NRC, 23 April 2009, <https://www.nrc.nl/nieuws/2009/04/23/adam-sluit-vier-hotels-damrak-11716964-a709809>.

36 Bart Middelburg, 'De Familie Barazani Doet Nu "Goede Zaken" in Costa Rica', *Het Parool*, 4 September 2012.

help criminals to do this, and some of the money is invested in real estate. It is then almost impossible to trace the criminal origins of the money anymore.

In *De Achterkant van Nederland*, a mayor describes how two expert stakeholders suddenly appeared in one of the council groupings. Initially, their contribution was greatly appreciated, but then, slowly but surely, they succeeded in shifting the decision-making in a direction that greatly benefited a property developer with a questionable background. Although hard evidence is lacking, the mayor is convinced that in this case, the democratic process was used for erroneous purposes.

Crypto-currencies are also interesting for the criminal world. First it was the bitcoin, but this has become too expensive and too unstable for most criminals. Criminal gangs often operate on the Dark Web, a hidden part of the Internet. Drugs, weapons and stolen credit-card details, among others, are traded in criminal web shops. The Dark Web can only be used via special software. The most commonly used is The Onion Router (TOR), which surrounds the original message with so many layers – just like an onion – that the source can no longer be traced. Initially, the technology was mainly used by cyberpunks and other Internet anarchists who wanted to remain shielded from the government. After some time, TOR was discovered by criminals, who have their own reasons for staying out of the government's sight.

What can be done?

Government intervention and subversive crime are inversely proportional to one another: when the government is naive or weak, or turns a blind eye, spaces are created for criminal actions, which are almost always used and exploited. On that score, criminal networks are alert and inventive.

Fighting subversion demands that we deal with the 'big boys', or 'hardened' criminals. The same is true of reducing the opportunities for, appeal or normality of being an accomplice to criminals, including in its relatively innocent or modest form.

Money is an important factor in subversive crime, but it is not the only one. Another factor is often the desire for autonomy; an aversion to a bourgeois society where you don't count, and a longing for status and recognition. Our approach to subversive crime must therefore also be linked to a (re)confirmation of a certain moral order. This concerns the question of what we consider acceptable in society, and how people can be supported (and sometimes forced) to comply with this order.

One public prosecutor told us: 'We have all created a monster.' If society continues to deny or downplay the problem, and does not actively join convincing attempts to tackle it, then the government will not be able to succeed, either; something that's long been known. Then this shady world will continue to exist in the Netherlands, and it will grow and flourish.

Tackling subversive crime is not only a legal issue, but it is also, above all, a social one – and this requires awareness and support from society. The social coalitions that we hope will result from this may be based on enlightened self-interest, but they should always include a moral component, too. Estate agents, owners of holiday parks, notaries and shopkeepers, but also schools and welfare organisations must be called upon to take responsibility. They are by no means natural allies; and they are often reluctant to step forward, partly because they are afraid of a loss of reputation.



An additional effort is needed. The huge size of the drugs world forms the backbone of subversive criminality. Pushing it back substantially is *conditio sine qua non*. Part of the push-back will also have to entail reflecting on drug use in our society, as well as how this is regulated legally, which must not result in the gates being opened further for mass use. The process of reflection will only be serious if we fully recognise the international dimension of the discussion, if only because the Netherlands' 'going it alone' on this point will not reduce the enormous international demand for drugs.³⁷ Without such a reduction, the Netherlands will remain a fertile breeding ground for large-scale illegal production for an international market. And with this, we can also raise the question of individual responsibility for a collective wrong: to what degree are individual users also responsible for the collective problems that have arisen as a consequence of large-scale drugs use?

Finally, a quote from Amsterdam's ombudsman, Arre Zuurmond, recorded in an interview in *Het Parool* on 2 June 2018: 'The hundreds of millions of euros that are earned every year in Amsterdam and that circulate in the underworld have a disruptive effect on society. It is becoming too easy to make money with crime. The government's absence is inexcusable. Things have got out of hand.'³⁸

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References

- 'Amsterdam sluit vier hotels Damrak', NRC, 23 April 2009, <https://www.nrc.nl/nieuws/2009/04/23/adam-sluit-vier-hotels-damrak-11716964-a709809>.
- Dun, Maarten van, & Paul Vugts. 'Stad ideaal voor drugs crimineel', *Het Parool*, 18 April 2018.
- Dun, Maarten van. 'Ombudsman: "Misdaad loont veel te gemakkelijk"', *Het Parool*, 2 June 2018, <https://www.parool.nl/amsterdam/ombudsman-misdaad-loont-veel-te-makkelijk-in-amsterdam~a4599257/>.
- Eerenbeemt, Marc van den. 'Vastgoed Geeft de Misdaad een Basis', *De Volkskrant*, 13 March 2007, <https://www.volkskrant.nl/nieuws-achtergrond/-vastgoed-geeft-de-misdaad-een-basis~b34fff54/>.
- Fijnaut, Cyrille, & Brice de Ruyver. *De derde weg, een pleidooi voor een evenwichtig cannabisbeleid*, Antwerpen: Intersentia, 2014
- Gestel B. van, et al., *Vastgoed & Fout: Een Analyse van Twaalf Strafrechtelijke Opsporingsonderzoek naar Illegale en Criminele Praktijken in de Woningsector*, Den Haag: WODC, 2008.

37 Cyrille Fijnaut & Brice de Ruyver, *De derde weg, een pleidooi voor een evenwichtig cannabisbeleid*, Antwerpen: Intersentia, 2014

38 Maarten van Dun, 'Ombudsman: "Misdaad loont veel te gemakkelijk"', *Het Parool*, 2 June 2018, <https://www.parool.nl/amsterdam/ombudsman-misdaad-loont-veel-te-makkelijk-in-amsterdam~a4599257/>.

- Heuvel, G.A.A.J. van den. *Collusie Tussen Overheid en Bedrijf: Een Vergeten Hoofdstuk uit de Organisatiecriminologie*, Maastricht: Universiteit Maastricht (speech), 1998.
- Kilmer, B., & P. Reuter. 'Prime Numbers: Doped. The Disaster Drugs: Heroin and Cocaine', *Foreign Policy*, 16 October 2009, <https://foreignpolicy.com/2009/10/16/prime-numbers-doped/>.
- Kruisbergen, Edwin. *Combating Organized Crime: A Study on Undercover Policing and the Follow-the-Money Strategy*, Amsterdam: Vrije Universiteit (PhD thesis), 2017.
- Middelburg, Bart. 'De Familie Barazani Doet Nu "Goede Zaken" in Costa Rica', *Het Parool*, 4 September 2012.
- Projectgroep Emergo. *De Gezamenlijke Aanpak van de Zware (Georganiseerde) Misdaad in het Hart van Amsterdam*, Amsterdam: Uitgeverij Boom, 2011.
- Tops, Pieter, & Jan Tromp. *De Achterkant van Nederland: Hoe Onder- en Bovenwereld Verstrengeeld Raken*, Amsterdam: Balans, 2017.



CASH, CRIME, AND COMMON SENSE

EFFECTIVE (AND NON-EFFECTIVE) WAYS OF TACKLING ILLICIT FINANCIAL FLOWS

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In February 2016, the European Commission adopted an action plan ‘against the financing of terrorism’. This action plan suggests that because ‘payments in cash are widely used in the financing of terrorist activities’, we should explore ‘the relevance of potential upper limits to cash payments’. In March 2017, the Commission announced a public consultation with respect to cash payment limitations (CPL). This short paper reviews the available evidence and takes the position that neither serious crime control nor human rights or business interests would be well served by such limitations.

The main argument in favor of CPL is that it can be an effective measure against terrorism finance, organized crime, tax evasion, and corruption, because cash provides anonymity and breaks investigative trails. Some have suggested that the time has come for advanced societies to reduce or do away with cash, which facilitates tax evasion and crime. High denomination notes should be removed from circulation. Rogoff³⁹ has also contended that ‘phasing out paper currency is arguably the simplest and most elegant approach to clearing the path for central banks to invoke unfettered negative interest rate policies should they bump up against the ‘zero lower bound’ on interest rates. Treasury bill rates cannot fall much below zero, precisely because people always have the option of holding paper currency, which at least pays zero interest.’ (For other observers, however, this is a reason why CPL should be shunned.) CPL proponents argue that in addition to tax and monetary policy benefits, trends towards cashlessness would contribute to more convenient and faster payments. In this context, several states have introduced lower denomination notes and restrictions on the use of cash.

Although there is consensus about the need to effectively detect, monitor, and investigate serious crime, there is disagreement on the extent to which CPL would advance this cause, if at all. One can agree wholeheartedly with the goal of traceability, but there is also the question of possible negative consequences that might outweigh any incremental benefit. Cash is popular and safe, and it supports numerous social and economic values, livelihoods, freedoms, and privacy. Before thinking about centrally imposed EU-wide policies, the principles of subsidiarity and proportionality, as well as the cash preferences of citizens, must be examined against what may turn out to be incomplete and ill-balanced transparency, leading to more challenging policing work.

A recent study⁴⁰ clearly shows that, despite technological innovation, efforts to reduce cash in society have been accompanied by a demand for cash that has grown both in absolute terms and relative to GDP (see the graphic below).

39 Kenneth S. Rogoff, *The Curse of Cash*, Princeton: Princeton University Press, 2016.

40 G4S, ‘World Cash Report’, *G4S Cash Solutions*, 2018, <http://www.g4scashreport.com/-/media/g4s/cash-report/files/2018-world-cash-report---english.ashx>.

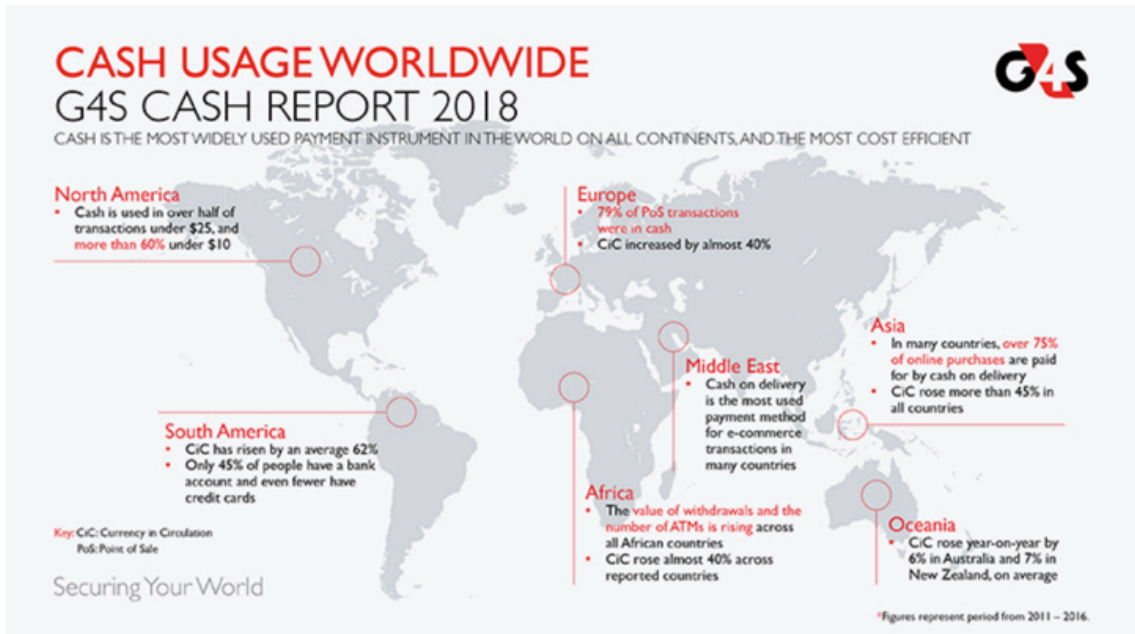


Fig. 1. G4S Cash Report 2018.

This may not be that surprising, given the advantages furnished by cash: People trust it, it costs very little, it is accessible and free to use, it offers confidentiality, it is not vulnerable to hacking, and it does not run out of power in emergencies.

Differences in the nature of crime challenges

Terrorism offenders in Europe have mostly used legal funds, and have only occasionally used fake IDs and perpetrated minor offences or frauds. Their cash transactions have involved small amounts. Recent extremist attacks have been low-cost (see more below), and because they are motivated by political and religious grievances related to local or overseas groups (e.g., al Qaeda or Daesh), they have sometimes involved cross-border travel and interactions. On the other hand, serious crime problems comprise not only ethnic gangs, referred to as ‘organized crime’, but also socially, financially, and environmentally costly misconduct by corporations, white-collar professionals, and even state agencies⁴¹. Profit and power typically motivate such national and transnational crime, which is also committed by respected and wealthy actors and can involve extraordinary amounts, but overwhelmingly does not involve cash. Criminal enterprises with local and ethnic membership that engage in property crimes, illegal drugs, human trafficking, goods smuggling, counterfeiting, etc. employ cash, but they do not declare it to authorities and do not ask each other for official receipts.

41 Gregg Barak, *Unchecked Corporate Power: Why the Crimes of Multinational Corporations are Routinized Away and What We Can Do About It*, New York, NY: Routledge, 2017; Judith Van Erp & Wim Huisman (eds), *The Routledge Handbook of White-Collar and Corporate Crime in Europe*, London: Routledge, 2015.



Tax evasion and tax avoidance schemes that may involve ‘lawful but awful’ practices⁴² that shift economic burdens to lower-income and less privileged members of society⁴³, can be committed by anyone. The amounts vary widely and can involve accounting frauds, offshore and tax haven jurisdictions, legal manipulations, or simple non-reporting violations. Motives for these practices range from profit maximization and family needs, to complaints about corrupt and unresponsive administrations, bad governance, or ideological opposition.

The point is that these crimes reflect diverse social problems and sources that cannot be addressed by the same method. CPL policies are not a panacea and may in fact provide incentives for criminal activities that are better organized and harder to detect.

Can CPL be effective against terrorism finance?

Contrary to conventional wisdom and some ‘expert’ views, the amounts related to terrorism are rather small. For example, if we put together various theories about al Qaeda’s finances, the group would have had to be awash with millions of dollars from rough diamonds, gold, charitable donations, legitimate businesses, and criminal enterprises, including drug trafficking. On the other hand, operatives have been found to be under-resourced or required to raise their own funds for operations. The perpetrators of the first World Trade Center bombing complained that they only had \$19,000 and so could not buy more explosives to make a bigger bomb.⁴⁴

We must differentiate between the funding of particular attacks and the funding of the ongoing operations of an organization. While the cost of a bombing or drive-through can be trivial, the funding of a militant group can involve significant amounts. Such costs could include training, procurement, travel, communications, command and control, propaganda, intelligence gathering and counter-intelligence, bribery of officials, etc. Establishing, maintaining, and increasing such infrastructures can be expensive. This applies to Daesh, for instance, but these finances are outside Europe and would not be affected by CPL here. This does not mean that all terror groups require substantial resources: Small and marginal groups may have expenses that can be covered by petty crimes or the members’ own income.

When it comes to specific operations, these are mostly inexpensive. In many instances, they can be low-budget and self-financed, such as the recent car attacks in Europe. It is estimated that the first World Trade Center attack cost less than \$19,000, the Bali bombings less than \$20,000, and the Madrid train bombing about €15,000, plus the value of some illicit drugs (see more in the table below, which is based on my previous research).

42 Nikos Passas, ‘Lawful but Awful: “Legal Corporate Crimes”’, *Journal of Socio-Economics*, 34.6 (2005): pp. 771-786.

43 Richard Brooks, *The Great Tax Robbery: How Britain Became a Tax Haven for Fat Cats and Big Business*, London: Oneworld, 2013; David Johnston, *Perfectly Legal: The Covert Campaign to Rig Our Tax System to Benefit the Super Rich--and Cheat Everybody Else*, New York: Portfolio, 2003; Michael Levi, ‘Serious Tax Fraud and Noncompliance’, *Criminology & Public Policy*, 9.3 (2010), pp. 493-513.

44 Nikos Passas, ‘Understanding terrorism financing’, in: *Commission of Inquiry into the Investigation of the Bombing of Air India Flight 182*, Ottawa: Public Works and Government Services Canada, 2010.

Cost of Attacks

- Madrid 2004 - ca 15,000 € (operational costs); explosives barter deal for drugs with street value of 35,000 €
- Bali nightclub bombings – about \$20,000
- US embassy bombings in Kenya and Tanzania – about \$10,000
- Attacks in Istanbul – less than \$40,000
- 9/11– about \$320,000 for 19 hijackers over about two years
- Paris bombs – a few hundred €
- USS Cole 2000 attack in Aden - less than \$10,000
- Bishopsgate IRA attack - £3000
- London 2005 attacks – a few hundred £
- Air India – 3,000 CAD
- Jakarta 2003 Marriott Hotel bombing - about \$30,000
- Chechnya: \$4,000 for airplanes; \$7,000 for attacks on Kashirskoye Highway and near metro station; Beslan \$9,500
- Germany: 2006 train bomb attempt –€200; Cologne bomb \$241

6/20/18

6

Fig. 2. Cost of attacks.

Recent research⁴⁵ shows that ‘in 73% of the plots in Europe in 2014–16, the terrorists generated at least part of their income from legal sources such as salaries, welfare benefits, sale of property and loans,’ that ‘criminal activities are not a very common source of funding for attack plots in Europe of late,’ and that ‘there is little evidence of an increasing integration between criminal networks and terrorists in the area of attack financing.’

CPL would cast a control net that would not be able to catch such small amounts, which do not require the use of €500 notes. Cash would not be reported, and amounts involved are too small to raise red flags or cross some of the suggested thresholds. In other cases, barter deals and alternative payment methods would easily circumvent CPL measures. Interestingly, terror risks and incidents have occurred in EU countries that have CPL, such as France, Sweden, Belgium, UK, and the Netherlands (see table below).

45 Petter Nesser, Anne Stenersen, & Emilie Oftedal, ‘Jihadi Terrorism in Europe: The IS-Effect’, *Perspectives on Terrorism*, 10.6 (2016): p. 15.

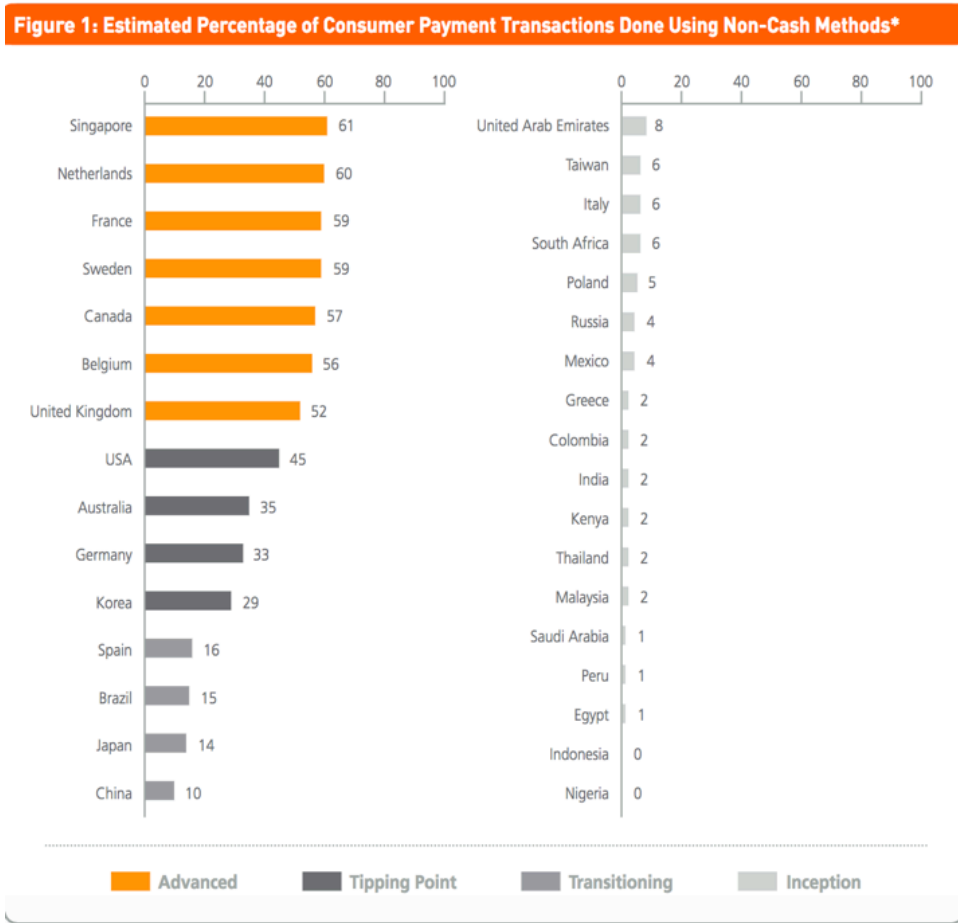


Fig. 3. Source: Mastercard Advisors (http://www.mastercardadvisors.com/_assets/pdf/MasterCardAdvisors-CashlessSociety.pdf).

Moreover, anonymity can also be preserved without the use of cash. We have observed the use of fake IDs by the cells behind the Paris, Brussels, and London attacks. Smuggling, trade diversion, mis-invoicing, and barter deals are also possible (services or goods provided freely or under threat; commodities, such as drugs, tobacco, alcohol, or diamonds). Third parties may also be used to avoid detection. Therefore, CPL could merely displace the problem, shift financial patterns, and provide incentives for offenders to become more sophisticated and better organized.

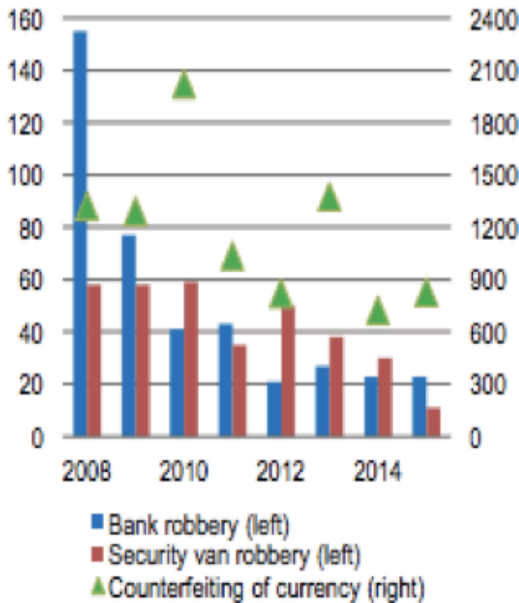
Can CPL help control money laundering?

It is essential to point out that the use of criminal money for illicit activities is not money laundering, but a transfer or exchange of value within the criminal context. Money is only laundered if offenders wish to engage in the legitimate economy, so cash transactions

between offenders can be of any size regardless of anti-money laundering and CPL measures, because they do not keep official records and do not report this business to the authorities. In addition, it is worth noting how societies with limited cash circulation are not necessarily witnessing a reduction in money laundering activity and reports. The table below shows an increase in money laundering cases in Sweden.

**Sweden:
Less cash – less cash crime**

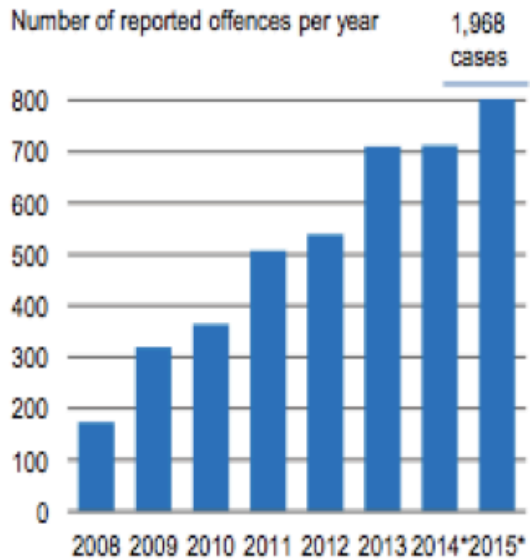
Number of reported offences per year



Sources: Brå/Swedish Ministry of Justice, Deutsche Bank Research

**Sweden:
Less cash – more money laundering?**

Number of reported offences per year



*In mid-2014, the legal provisions regarding money laundering were changed.

Sources: Brå/Swedish Ministry of Justice, Deutsche Bank Research

Fig. 4. Money laundering in Sweden.

More important, money laundering can be executed efficiently without cash. The ‘Russian Laundromat’ case alone involved close to \$21 billion, 5140 companies, 732 banks, and 96 countries (see below).



Fig. 5. Source: <https://www.occrp.org/en/laundromat/>.

If cash is not an option, launderers may make more extensive use of shell companies, the dark net, cryptocurrencies, trade- and service-based money laundering, or other channels. Further, if cash is to be used, it may be taken to jurisdictions where scrutiny is avoided. In criminal business-to-consumer transactions, other payment methods can be used, including pre-paid cards, cryptocurrencies, mis-invoicing, barter deals, or 'alternative currencies', such as the casino 'black chips' that are used in Macau and Hong Kong to purchase illegal services. As with terrorist finance, CPL would lead serious criminals and money launderers to use other methods, channels, and locations.

As Professor Schneider⁴⁶ has noted, countries with CPL may actually also have high (or higher) rates of shadow economies.

46 F. Schneider, & B. Boockmann, *Die Größe der Schattenwirtschaft – Methodik und Berechnungen für das Jahr 2016*, Linz & Tübingen: Johannes Kepler University Linz & Institut für Angewandte Wirtschaftsforschung e.V., 2016.

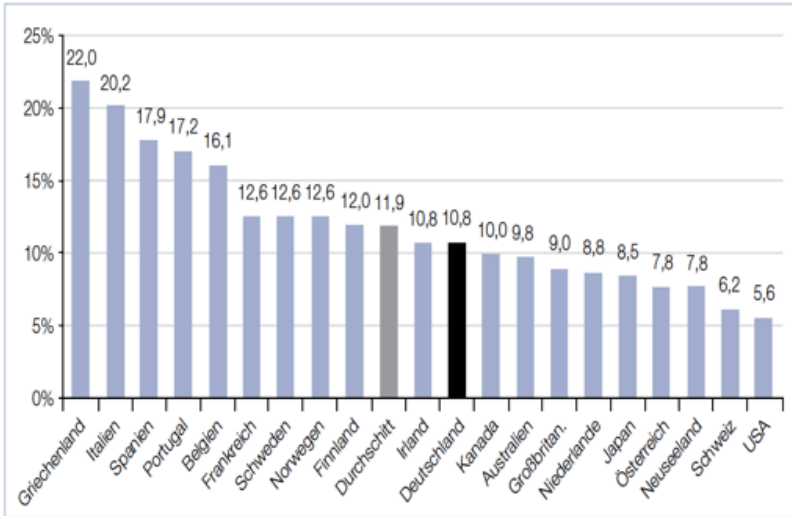


Abbildung 1:
Ausmaß der Schatten-
wirtschaft in den
OECD-Ländern
(im Verhältnis zum BIP)

Quelle: Schneider/Boockmann
(2016), S. 23.

Fig. 6. Extent of black economy in OECD countries.

Levels of corruption are high, even in countries with CPL (see table below).

Abbildung 2:
Hohe Korruption
trotz Bargeldobergrenze

Quelle: Europäisches Verbraucherzentrum, Transparency International, Corruption Perceptions Index 2015, eigene Darstellung.

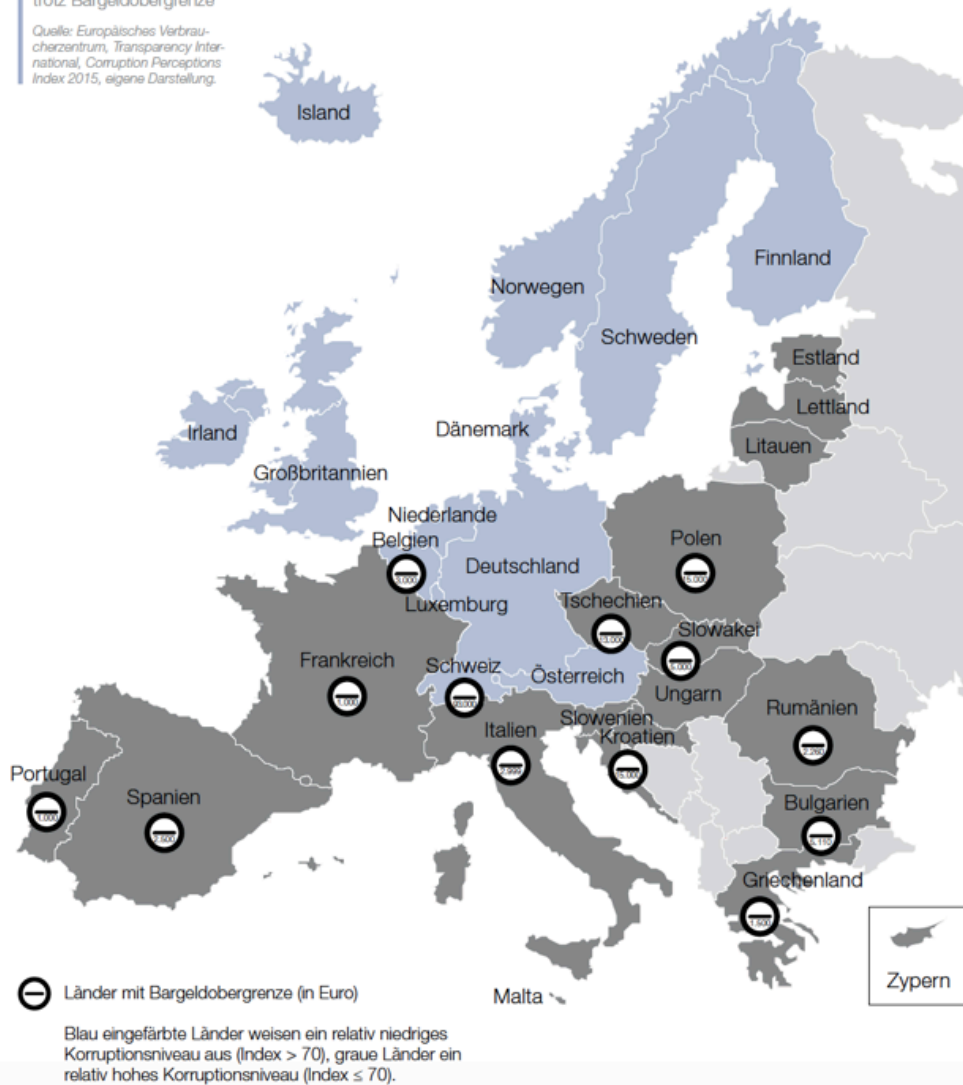


Fig. 7. High corruption despite cash cap.

Other evidence, such as self-reported fraud and corrupt corporate executives, again points to very high levels in countries with less cash in circulation.

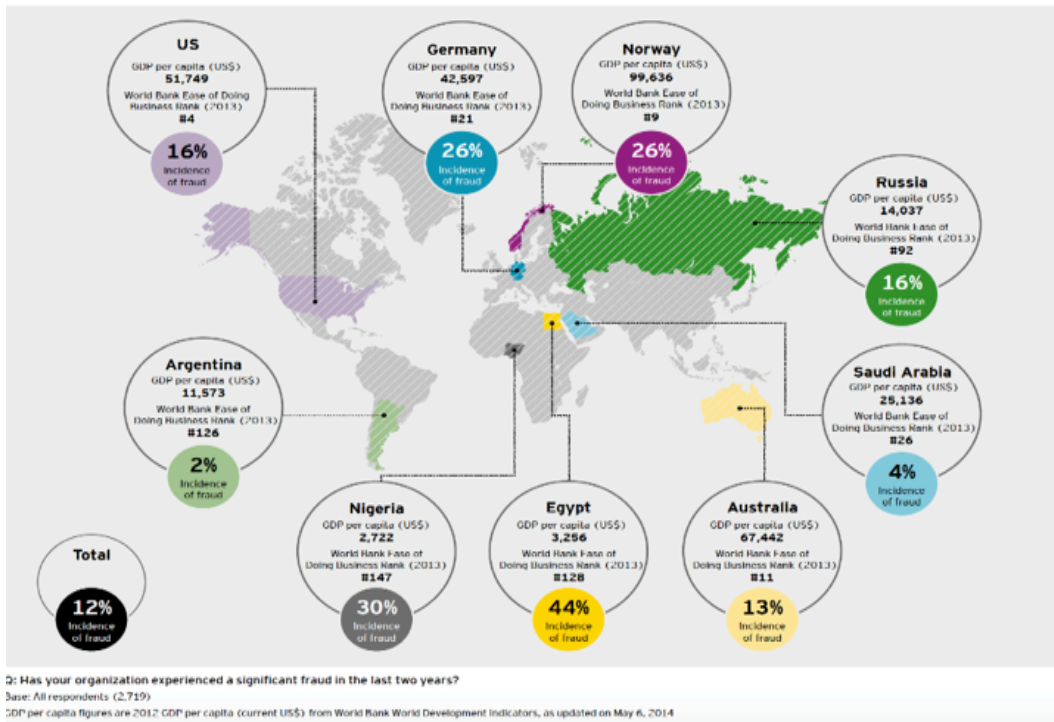


Fig. 8. Source: Ernst and Young’s 13th Global Fraud Survey.

How about tax evasion?

First of all, mixing tax evasion with terrorism and other serious crime issues muddies and inflames the debate about CPL. Tax evasion is better dealt with by effective state services and responsiveness to citizens, regulatory reforms to reduce tax avoidance, and related lawful but awful practices. The most effective remedies are good governance, trust, and legitimacy. Taking away the freedoms and rights that go hand in hand with cash in fact hurts these causes. As seen in Greece, a country in financial crisis, CPL and EU-blessed policies on capital controls have led to diminishing returns as state revenue actually shrinks (see table below, where the diminishing returns are shown in the top-right corner).

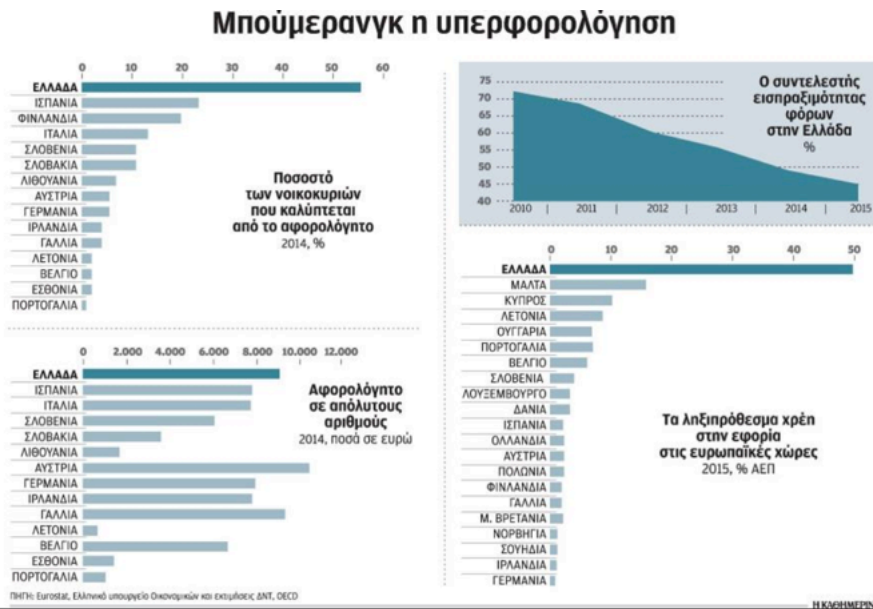


Fig. 9. Source: Kathimerini newspaper

Finally, research suggests that the association between high denomination notes and the serious crimes considered here is questionable: Countries with high denomination notes have low levels of crime and organized crime (e.g., Japan, Singapore, Switzerland, UAE), while countries with very low denomination notes have high levels of crime (e.g., Brazil, Nigeria, South Africa, Venezuela). Furthermore, tax evasion and corruption do not go hand in hand with low denomination notes: Georgia has a \$200 denomination note, but enjoys low levels of corruption and tax evasion, whereas the largest notes in Malaysia and Uzbekistan are equivalent to \$11 and \$1.57, respectively, but both countries have high levels of corruption.⁴⁷ Moreover, the increase in electronic payments is associated with the increase in fraud and other forms of new crimes (see table below on Sweden).

In short, CPL or cashlessness will not eliminate for-profit or ideologically motivated crime, as alternatives for illegal transactions and value transfers can substitute for cash. In addition, as payments go digital, methods change and fraud increases (see the table below, which shows increasing card fraud in virtually cashless Sweden).

⁴⁷ Simon Black, 'An Interesting Perspective on the War on Cash', *Sovereign Man*, 30 November 2016, <https://www.sovereignman.com/trends/interesting-perspective-on-the-war-on-cash-20526/>.

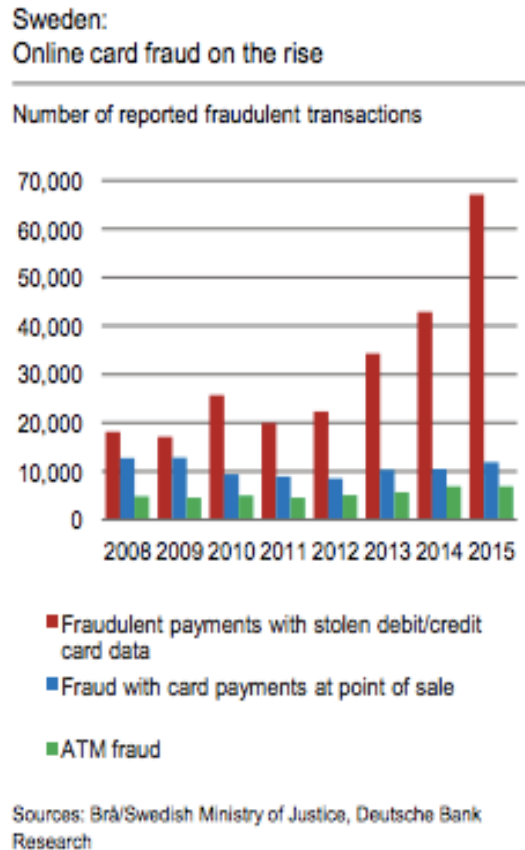
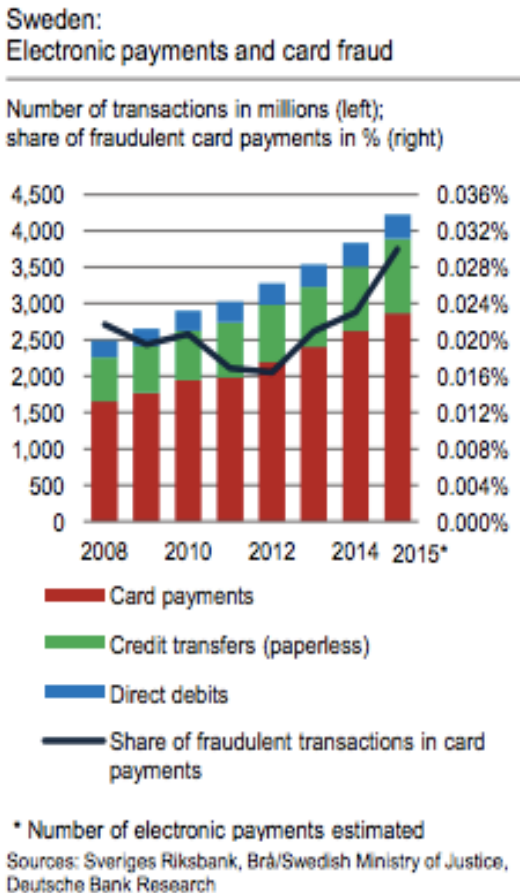


Fig. 10. Increasing card fraud in Sweden.

On the other hand, misconduct that has devastating economic, social, environmental, health, or security effects is committed through methods that involve no cash at all: unlawful risk taking and frauds (cf. global financial crisis), sanctions violations, kleptocratic corruption, massive money laundering, and tax evasion and avoidance.⁴⁸ The LIBOR rigging scandal, for example, ‘involved a number of global banks that colluded and systematically manipulated market rates resulting in billions of dollars in fines:

- Barclays settled its case with authorities for \$435 million (July 2012).
- UBS paid global regulators a total of \$1.5 billion (December 2012).
- Rabobank settled charges for over \$1 billion (2013).

48 Nikos Passas, ‘Informal Payments, Crime Control and Fragile Communities’, In: C. Beer, E. Gnan & U. W. Birchler (eds.), *Cash on Trial*, Zurich: Société Universitaire Européenne de Recherches Financières (SUERF), 2016.



- EU regulatory authorities settled their investigation into Barclays, Deutsche Bank, RBS, and Société Générale, and fined the last three banks a total of 1.7 billion euros (December 2013) for colluding in manipulating market rates between 2005 and 2008. In exchange for revealing the cartel to regulators, Barclays was not fined. JPMorgan Chase and Citigroup were also fined.
- The total amount of fines paid by Deutsche Bank to U.S. and European regulators was \$3.5 billion.
- Citigroup, JPMorgan Chase, Barclays, Royal Bank of Scotland, and UBS pleaded guilty to criminal charges of manipulating foreign exchange markets, and agreed to pay over \$5 billion to the U.S. Justice Department and other regulators (May 2015). UBS pleaded guilty to additional LIBOR-related fraud, and paid \$203 million in penalties.’ (Passas, 2016)

Odious debt cases and the Panama and Paradise Papers, among other revelations, have also made the same point emphatically.

None of such serious crime risks would be controlled or eliminated under CPL. Ironically, the culprits are the institutions to which citizens would have to hand their cash under CPL regimes. Levels of distrust of government and banks are high in some places due to capital controls and bail-outs in emergencies. Quite importantly, there are about a billion people around the world who do not have bank accounts. We do not live in a bubble, but constantly interact with these fragile communities, which unfortunately also become victims of the so-called de-risking activities of banks, which effectively starve communities and regions, drain capital from entire economies, undermine development, and block growth.

Regulation of remittance flows has been inconsistent, misapplied, mis-measured, costly, and counter-productive, especially with respect to informal channels, which furnish vital services. Policies are formed with imperfect knowledge of sectors and networks subject to regulation, independently of industry/community views, and without coordination at national and international levels. Regulation is of course necessary, but it must be proportionate to the risk and appropriate to the socioeconomic and cultural environments. As practiced today, de-risking eliminates some risk for individual financial institutions, but generates systemic risks, additional externalities, and displacement to channels that are harder to monitor: It increases the cost of sending money to the very people who need more options and lower costs for remittance services; needy communities suffer or may be unable to survive in challenging and conflict-ridden contexts; development projects and economic growth are undermined by a lack of liquidity and investment, with dire effects on the banking industry and other industries; and it leads to anti-West sentiment, radicalization, and violent conflict, as well as additional pressures to migrate to Europe or OECD countries in search of economic and physical security.

Conclusion

Instead of fighting terror with error, policies ought to be based on a solid cost-benefit analysis. Neither Europe nor the rest of the world is ready for cashlessness (cf. India’s experiment). There are few, if any, benefits, while the costs are legion. Negative consequences would affect legitimate entrepreneurs and people’s right to privacy. CPL may lead to the financial exclusion of vulnerable populations, problems in transacting in times of natural or other crises when infrastructures and technologies are disrupted, too much power and control in the hands of governments and big banks, new crimes, incentives for more sophisticated misconduct,

human rights violations, and less trust in institutions. The CPL argument is on thin ice vis-à-vis the EU's aims and principles, effectiveness, and potential collateral damage.

CPL should not be imposed against the will of the people whose interests the proposed policy would undermine rather than protect. Instead of considering policies with little or no effect on stated objectives, the key aim ought to be the construction of a demand-side approach to serious crime problems: a strategy based on a solid understanding of the root causes and key drivers of terrorism, serious crime, and tax evasion. Supply-side approaches have not worked in the past (cf. drug trade) and will be ineffective in the future too. We need:

- Smart-policing that leverages new technologies, control options, available intelligence.
- Mapping of illicit networks and their methods.
- Financial controls that are well thought out.
- Outreach and two-way communication with stakeholders and participants in markets, including emphasis on the role of the private sector.
- Better cooperation within and across countries to distinguish between the transparency (instant or automated visibility) and the traceability of transactions.
- To enforce laws in the context of wider social objectives.
- Performance indicators for adjustments and to monitor successes.
- Adequate resources to plan well and make all this happen.

Policymakers bear the responsibility to maintain and enhance the reliability and credibility of the financial system, to ensure the application of the rule of law and fairness in markets and society, to shun rushed judgments and ill-considered measures, and to consider thoroughly the potential adverse consequences of proposed policies. I hope this work assists in the exercise of this important task and responsibility.



References

- Barak, Gregg. *Unchecked Corporate Power: Why the Crimes of Multinational Corporations are Routinized Away and What We Can Do About It*, New York, NY: Routledge, 2017
- Black, Simon. 'An Interesting Perspective on the War on Cash', *Sovereign Man*, 30 November 2016, <https://www.sovereignman.com/trends/an-interesting-perspective-on-the-war-on-cash-20526/>.
- Brooks, Richard. *The Great Tax Robbery: How Britain Became a Tax Haven for Fat Cats and Big Business*, London: Oneworld, 2013.
- Erp, Judith van, & Wim Huisman (eds). *The Routledge Handbook of White-Collar and Corporate Crime in Europe*, London: Routledge, 2015.
- G4S. 'World Cash Report', G4S Cash Solutions, 2018, <http://www.g4scashreport.com/-/media/g4s/cash-report/files/2018-world-cash-report---english.ashx>.
- Johnston, David. *Perfectly Legal: The Covert Campaign to Rig Our Tax System to Benefit the Super Rich--and Cheat Everybody Else*, New York: Portfolio, 2003.
- Levi, Michael. 'Serious Tax Fraud and Noncompliance', *Criminology & Public Policy*, 9.3 (2010), pp. 493-513.
- Nesser, Petter, Anne Stenersen, & Emilie Oftedal, 'Jihadi Terrorism in Europe: The IS-Effect', *Perspectives on Terrorism*, 10.6 (2016): p. 15.
- Passas, Nikos. 'Lawful but Awful: "Legal Corporate Crimes"', *Journal of Socio-Economics*, 34.6 (2005): pp. 771-786.
- 'Understanding terrorism financing', in: Commission of Inquiry into the Investigation of the Bombing of Air India Flight 182, Ottawa: Public Works and Government Services Canada, 2010.
- 'Informal Payments, Crime Control and Fragile Communities', In: C. Beer, E. Gnan & U. W. Birchler (eds.), *Cash on Trial*, Zurich: Société Universitaire Européenne de Recherches Financières (SUERF), 2016.
- Rogoff, Kenneth S., *The Curse of Cash*, Princeton: Princeton University Press, 2016.
- Schneider, F., & B. Boockmann. *Die Größe der Schattenwirtschaft – Methodik und Berechnungen für das Jahr 2016*, Linz & Tübingen: Johannes Kepler University Linz & Institut für Angewandte Wirtschaftsforschung e.V., 2016.

TRUE CRIME: MAJOR ANTI-MONEY LAUNDERING OPERATION

LOCAL ANSWER TO ILLICIT FINANCIAL FLOWS THROUGH MONEY TRANSFER OFFICES (ROTTERDAM)

Meike Willebrands

Money transfer operators, or MTOs, are popping up all over the place. Especially in Rotterdam-South where, in the Beijerlandse laan and Dordtselaan area, MTOs dominate the street scene. The sector seems to attract criminals laundering dirty money. Besides the *Public Prosecution Department* and the police, the Regional Expertise Centre (RIEC), the municipality, Tax Authorities, Customs and the Chamber of Commerce have now joined forces to combat this growing problem. During a large-scale operation on 24 October, MTOs across the country were investigated. The operation focused on Rotterdam where, among other things, illegal gambling practices came to light and cash, including counterfeit money, and accounts were *seized*. A report of the operation in Rotterdam South.

It is 11:00 and seventy officers are ready to inspect 18 MTOs. The first search teams start at the Suri Change and Anjo MTOs in Dordtselaan. It is only at these two offices that the search is based on suspicion of money laundering. The police cars and customs vans in the street attract a lot of public attention. Inquisitive residents have no reservations about watching from a distance and asking what was going on. And that was the very objective of the operation. Drawing attention to the problem. Demonstrating why such action is necessary. Because one characteristic typical of this kind of *subversive crime* is that it is often invisible.

Outstanding fine

Public prosecutor Nanet Oosterveld launched the searches. At MTO Anjo, the search team is told that the money transfer office has moved to The Hague. Two trainees explain that the business is now a construction company. Strangely enough, they do not know who the owner is. The police and Tax Authorities do not settle for that and search the property. Especially once the Dutch Central Bank (DNB) reports that Anjo still registers money transfer operations despite the situation initially appearing otherwise. They enter bare rooms, interconnected by narrow passages. There is also an apparently closed Western Union office. The detectives soon stumble across a large number of files, the accounts of the MTO in question. An abandoned computer goes into screensaver mode. 'Maybe the owner left in a hurry', an officer calls out. The owner then suddenly appears from the basement, claiming he 'had been working' in the adjacent building. He feigns ignorance. Then the father of one of trainees comes in. It turns out that the man had an outstanding fine of 574 euros, which he is required to pay immediately. The detectives *confiscate* the MTOs accounts for further investigation. In the next road, Beijerlandse laan, a building has been opened where residents and business people can go for a cup of coffee and information about the operation. Loes van der Wees,



Public Prosecutor with the National Programme Rotterdam-South (NPRZ) is there. She is one of the members of the multidisciplinary team seeking to develop innovative ways of tackling subversive crime. The team is specifically investigating criminal financial flows in Rotterdam-South, and is therefore pleased to take part in the national operation. 'We see that huge flows of criminal money are circulating in Rotterdam-South. National Police Force investigations identify MTOs as risks in relation to covering up criminally acquired assets. The offices are attractive ways of laundering dirty money out of sight of the authorities.' The Public Prosecutor argues that this creates a shadow economy and a situation on the streets that you would rather not have.

Sixty money operators

MTOs must report amounts of 2,000 euros or more to the Financial Intelligence Unit-Nederland (FIU-Nederland), which investigates and may subsequently label unusual transactions suspicious. According to Van der Wees, however, this is easily avoided. Large amounts can simply be shared between the countless MTOs on the street, which often have the same owner anyway. There are no fewer than 60 MTOs in Rotterdam-South: a fact which should trigger alarm bells.

Analysis by the RIEC has revealed that some 52,000 euros worth of *suspicious* transactions take place every day in Rotterdam-South. Over 50,000 euros a day in an area where the average annual income is around 17,000 euros. Where unemployment levels are high, with growing numbers of people in debt. The team has launched its large-scale operation with the MTOs because they are known to handle criminal money. The team hopes that, by joining in with the national crackdown and operating in full visibility, they will let people see what is going on.

Shadows

'Our aim is to dispel the MTOs' misconception that they are operating under our radar. To bring them out of the shadows. That is why we are investigating them all', Van der Wees explains. The mushrooming of MTOs stems from a legislative amendment in 2009, making it easier to open a MTO since a licence from the Dutch Central Bank (DNB) is no longer required. This resulted in an explosive growth in the number of MTOs: between 2002 and 2009 there were between 20 and 50 MTOs in the Netherlands. By 2015, this had risen to 1,300 and there are currently believed to be around 1,500. Van der Wees stresses that the comprehensive approach is essential if it is to have any effect at all in the sector. It is not just criminal investigations that are important. The Tax authorities examine the accounts, the Chamber of Commerce checks the registrations and the municipality can close a building if anything suspicious is revealed.

At midday, Public Prosecutor Nanet Oosterveld's phone rings. She is urgently called to Beijerlandse laan where it is suspected that a former MTO is being used for illegal gambling. A computer screen and a suspicious receipt do raise a frown on her face. To make absolutely sure, she calls the Netherlands Gaming Authority (KSA), whose officers will arrive as soon as possible. There are various computers in the shop where, according to stickers in the window, you can have passport photos taken and get printing work done. Two men are there, sitting cross-armed and fidgeting nervously. One of them is the owner. 'He tried to run downstairs, but we stopped him on the stairs', the officer tells her. 'Due to suspected illegal gambling, there may also be illicit money here. There are more computers downstairs. He might have

wanted to destroy evidence.’ But before the search can begin, they have to wait for police dog Jinka, an Alsatian with a nose for banknotes.

Illegal gambling

This intervention by the authorities does not go unnoticed in the street. Young men walk past, briefly glancing at the owner sitting, waiting for whatever is about to happen. Outside neighbouring shop buildings, people smoke an extra cigarette. Jinka arrives within the hour. She runs through the building busily sniffing. She doesn’t find anything. The KSA officer, however, does. In next to no time, he scans the computers as if it is no work at all and soon finds what he is looking for. The browser history quickly proves the suspicion of illegal gambling to be correct. Some computers are even still logged into websites so that gambling is immediately possible. The public prosecutor doesn’t hesitate for a second: the shop is to be cleared and the computers and business records seized. The owner stays sitting silently in the corner. The people of Beijerlandse laan look on.

Past life

The history of Beijerlandse laan contrasts sharply with current reality. Hanging on the walls of Van der Wees’ building, where locals are gradually arriving in search of information, are photographs of a past life. People used to like shopping there. It was a nice street to live in, to run a business in. The decline has been particularly bad in the past few years. That is why the trend must be reversed. A business owner who has worked in Beijerlandse laan for years and chairs the local business council’s security committee applauds the operation. ‘Visible intervention by the authorities is very important in this street’, he explains over a coffee. According to Van der Wees there are plenty of people in Rotterdam-South who do work hard to earn honest money. ‘They come home at the end of a long day at work to find their neighbour sitting on the pavement with friends and know that he’s done nothing at all. Yet that neighbour has a bigger car. We want to dispel the concept that anyone living in Rotterdam-South is, by definition, either hopeless or criminal. It is unacceptable that people in this area should have fewer opportunities. A lot of people are working very hard to change that’, says Van der Wees from experience.

Long-term task

The NPRZ is particularly committed to this. Extra efforts are being made to help people in the area find a job, to give children a good education. The activities must offer an alternative for young people who are at risk of being tempted to earn illicit money quickly and relatively easily. Van der Wees: ‘The group involved in criminal money is ruining that. Setting the wrong example for the young. We will continue to make every effort to address this problem in the years ahead. This operation is a fine starting signal, but this project is a long-term task.’



THE CITY OF AMSTERDAM AS PROPERTY OWNER

LOCAL ANSWER TO ILLICIT FINANCIAL FLOWS THROUGH REAL ESTATE (AMSTERDAM)

Judith Hart

It is a familiar sight to anyone who has ever visited the city centre of Amsterdam. Alongside all the wonderful things Amsterdam has to offer, such as the charming canals and monumental buildings, there is no avoiding the drunken tourists, shoddy little shops, ‘coffee shops’ with their overpowering smell of cannabis and, last but not least, the prostitutes in their ‘shop windows’. Welcome to Amsterdam! Or rather: welcome to the postcode 1012 area. Because it is here in the medieval heart of the city that, for years, there have been countless window brothels, coffee shops and other ‘overrepresented functions’⁴⁹ and it is here that there is a lot of trouble.

Some time ago, the city decided it was time to intervene. How? By implementing a coordinated and diverse package of measures, from banning beer bikes to improving public spaces and from banning new souvenir shops to installing fountains – to name just a few examples. The aim was also to buy out window brothels and coffee shops. Not only to make the area more liveable and more appealing, but also to attract different kinds of owners and tenants. While it may not be obvious that a considerable number of properties and businesses are owned by shady or downright criminal parties, it is alarming none the less. They have a lot of money they need to dispose of and can afford to pay high prices, pushing the prices up even higher. In addition, mainstream financiers such as banks, are reluctant to invest in the area. These are all factors which can be conducive to criminal and dubious investments. By buying these buildings, the city can gain more control over the types of businesses in the area, which can also be taken back from criminal ownership – at least that is the idea.

Of course, there are a number of ways the government can itself crack down on crime and non-transparent investments. There is the criminal justice system, of course: legal action can be taken if crimes, including money laundering and fraud, can be proven. The authorities can also screen parties under the Bibob Act⁵⁰ or, in Amsterdam, by applying the BIO⁵¹-regulations. Bibob screenings may only be carried out if a permit or subsidy is required or if the authorities themselves are party to the sale or ground lease. Where two private parties are concerned, the BIO regulations offer a good alternative. They give the municipality right of first refusal

49 This term refers to phone shops, mini-supermarkets, souvenir shops, head-, seed-, and smartshops, massage salons, seks establishments, currency exchange offices, gaming halls and low-end bars, restaurants and hotels.

50 The Bibob is an abbreviation for the Public Administration (Probity Screening) Act (Bevordering Integriteit Beoordelingen Openbaar Bestuur).

51 The BIO is an abbreviation for the Integrity and Agreements Provision, a policy regulation of the municipality of Amsterdam.

and enable it to carry out an integrity screening of the purchasing party. This is a way of controlling the real estate in a particular area. I was curious to learn how the policy of buying up properties works, so I talked to the directors of two municipal holdings (public limited companies, in which the city has shares) which have operated in the area for some time, N.V. Zeedijk and 1012 Inc. However, let me first provide a little background information about the postcode 1012 area, better known as the Red Light District (*De Wallen*).



Fig. 1. Postcode 1012 area.

The district now identified as the postcode 1012 area, dates back to the 14th century. It was traditionally frequented by seamen looking for a good time in one of the many bars, gambling halls and brothels, where women were on offer and alcohol flowed freely. The typically Dutch kind of tolerance, the habit of intentionally looking the other way when the law is violated, has also been the rule here for a very long time. Because while prostitution over the years was sometimes legal and sometimes not,⁵² the authorities always turned a blind eye to it. Even when it was illegal. Other things were also tolerated, such as gambling halls or the opium dens brought in by the Chinese. Everyone knew where they were but action was seldom taken against them. This policy of tolerance likely contributed to Amsterdam being struck by a rapidly spreading and extremely destructive epidemic in the early seventies. Kilos of unadulterated heroin were smuggled in from Asia and market demand soared. The number of addicts grew by thousands every year.

In the 70s and 80s, drugs crime became more brutal and a new generation took over: the financial stakes increased and organised crime established a foothold in the neighbourhood,

⁵² Prostitution was legalised in the Netherlands in 2000, with the aim of providing better protection to prostitutes.



thanks in part to property ownership in the Red Light District.

The neighbourhood became a no-go area with boarded up buildings, drug addicts and dealers. There were no more postal deliveries and household refuse was collected under police escort. At that time, in 1985 to be precise, the N.V. Zeedijk company started buying up, managing and leasing properties. The company currently owns 90 properties, which it manages very carefully.

N.V. Zeedijk

N.V. Zeedijk director Janny Alberts, who has been working for the organisation since 1999, explains that the initiative to set up N.V. Zeedijk was a direct response to the campaigning by the residents and local businesses at the time. They were ‘absolutely fed up’ with how bad their street had become. After the protesters had occupied the council chamber and a policeman had been shot dead on the Zeedijk street itself, the City of Amsterdam decided to establish the company, a collaboration between the residents and local businesses, the City of Amsterdam and several banks.

To this day, these parties⁵³ remain shareholders in the company, together with the Ymere corporation. This private-public organisation *avant la lettre*, operates on a small scale and every day the staff can be found ‘in the field’, to answer questions and keep an eye on the situation. Alberts believes in the human dimension: if you want to keep your neighbourhoods safe and resilient to criminal influences, then social cohesion is vital. This is why staff talk to tenants about their behaviour in person, rather than sending them impersonal letters, and why tenants can drop in to see staff rather than having to send an email, and even why the stairwells of rented buildings are inspected. Moreover, while the tenancy agreements are worded positively, mostly stating what is allowed rather than what is not allowed, by tailoring them very specifically to the type of business concerned, anything that is not appropriate to that type of business is not permitted. And you can, for example, reject an application for a stand-alone ATM by classifying it as ‘subleasing’, because, as Alberts explains, ‘where is that cash coming from?’

Airbnb is not allowed in any of the properties owned by the company.

N.V. Zeedijk wants to attract a particular type of tenant, who is committed to the neighbourhood and will complement the existing tenants. The company therefore charges ‘realistic’ rents which, according to Alberts, is not the same as ‘in line with the market’. Because, she asks herself rhetorically, who are the people in that market? Don’t they also include criminal entrepreneurs? They artificially force the prices up by investing huge amounts of criminally acquired money in real estate and businesses. N.V. Zeedijk is a financially healthy company generating profits that even the banks are content with so, apparently, the rents charged in Zeedijk are realistic. There is much complaint at the moment about money-grubbing bankers, but Alberts feels she must stress that it is in part thanks to the banks that the company is such a success. It is a shame that not all investors have the same sense of social responsibility, making it difficult to give unattractive streets a boost. Because, Alberts continues, it’s all very well improving a street with all kinds of measures and subsidies but if big money is the deciding factor, you are destined to fail. She takes

53 The city of Amsterdam is the largest shareholder, holding 78% of the shares. Other shareholders in the company are: ABN AMRO Bank N.V., Rabo Vastgoedgroep Holding N.V., REI Fund Netherlands B.V., Coöperatieve Rabobank Amsterdam U.A., Stichting Ymere and ASR Deelnemingen N.V.

Haarlemmerdijk as an example, which until recently was a run-down street in the heart of central Amsterdam. Lots was invested in making the street attractive once more, and it worked. So well, in fact, that it was voted the nicest street in the Netherlands in 2011. There was a downside, however: the rents rose so high that many retailers had no choice but to leave, and the street spiralled back down into decline, Alberts explains.

1012Inc

In 1999 another company was set up, N.V. Stadsgoed, a subsidiary of the Stadgenoot housing corporation. The foremost mission of this company was to enhance the liveability of Amsterdam's inner city by stopping buildings being used for undesirable purposes. Dilapidated properties were renovated, improved and carefully restored. N.V. Stadsgoed has since been incorporated into 1012 Inc, a joint venture between N.V. Stadsgoed, Syntrus Achmea, which manages two major pension funds, and the City of Amsterdam. The objectives have been amended slightly, but remain largely the same: 1012 Inc independently purchases properties, which it then redevelops and subsequently manages. 1012 Inc prefers not to sell properties, but if it does then the municipality has a pre-emptive right of purchase. The organisation currently owns around 150 properties in the area, which are rented out either as housing (often with several homes in each building) or as commercial premises. It was set up in 2016 and in that year's annual report, I notice that there are different kinds of rental; some of the homes are rented out as social housing, others as mid-range housing. Commercial premises sometimes have 'step-up rents' or long-term low rents. This is done as a way of controlling the type of tenant. Despite these lower rents, the agreed 4% return on investment was still achieved in 2016 and paid out as dividend to the shareholders. Including the City of Amsterdam, which owns more than 20% of the shares.



Fig. 2. From brothel to trendy coffee bar.



Ronald Wiggers, Director of 1012 Inc (and previously, from 2004, of N.V. Stadsgoed) underlines the importance of such an organisation as his in the property world, which is so vulnerable to money laundering. You can launder money through ABC constructions,⁵⁴ through business operations, or simply by changing dirty money into clean money (for example by using stand-alone ATMs), Wiggers has learned. Retaining ownership of the properties, and leasing and managing them strictly, enables you to genuinely exercise influence in an area. This does, though, demand time and perseverance. Once again, as with N.V. Zeedijk, four to five members of 1012 Inc staff come to the area every day to check that no agreements are being violated and that everything is running smoothly. 1012 Inc tenancy agreements are more than honest about all this. Initially consisting of just 2 A4 pages, today you almost need a legal advisor to understand the 30 pages (!) correctly. This is really necessary, Wiggers points out, because you need to know who (and what kind of money) you are dealing with – especially in a neighbourhood like this one. That is why Wiggers regrets the abolition of the ‘traffic light covenants’, under which the police would screen a prospective new tenant and indicate by means of a ‘red’ or ‘green’ light whether or not the party concerned was a suitable candidate. This was an effective way of barring the ‘wrong’ sort of tenants. That is also Wiggers’ reason for campaigning against ‘substitution’. This legal device was initially intended to enable entrepreneurs selling small businesses to assign any leased property to the new owner: it has however become a legal vehicle allowing the use of front men.

The City of Amsterdam as property owner

Buying up properties, together with the measures taken by the City of Amsterdam mentioned above has had a kind of flywheel effect. The Red Light District is no longer a no-go area. Thanks to the clever measures taken by NV Zeedijk and 1012 Inc, it has actually become quite a trendy neighbourhood (well, in part anyway), able to attract not only the right kind of tenant who is committed to the neighbourhood but also Amsterdam locals. While this was by no means plain sailing, the two directors can certainly identify several success factors. It is important that the companies like theirs can operate independently, without delaying bureaucratic procedures (however necessary), and respond effectively to current developments. The market has its own dynamics and speed and as a participant you must be able to respond accordingly. In addition, success is also linked to a ‘micro, street-focused approach’: neighbourhood presence and regular contact with tenants is a must. A dedicated management, backed by the city council, also helps. Wiggers praises the late mayor Eberhard van der Laan for his commitment and determination. It was he who convinced institutional investors to become shareholders in 1012 Inc. Knowledgeable and inspired officials, who have an understanding of the world of real estate and are familiar with the city’s organisation and regulations are, of course, equally invaluable. And dare to be creative: sometimes 1012 Inc even buys out its own tenants, paying the sitting (less desirable) tenant a sum of money to wind up their business.

⁵⁴ ABC constructions are real estate transactions relating to properties sold at least twice within a period of six months. This occurs often in practice and there is usually no cause for concern, but the construction is susceptible to such fraud as money laundering and tax evasion. There are certain grounds for considering a transaction suspicious, a substantial increase in the value of a property, for example.

Without a doubt, the most important thing is to be able to influence the type of tenant you attract. That is why you need to find investors who will settle for a 'realistic' rent to enable you to attract engaged tenants who will be an asset to the neighbourhood. Who will focus not only on tourists and visitors, but also on the neighbourhood itself, and on the people who live in Amsterdam. And let's be clear about it, there's apparently still good money to be made even with 'step-up' and 'realistic' rents. Welcome to Amsterdam!

PREDATORY FORMATIONS DRESSED IN WALL STREET SUITS AND ALGORITHMIC MATH HIGH FINANCE IN DAILY LIVES

Saskia Sassen

One of the major challenges in struggles for a more just society is the rise of complex predatory formations. In using this type of formulation, my effort is to emphasise some distinctions often lost even in the critical scholarship about today's political economy, in both global and national approaches. Here I provide a brief description of what I mean by such types of formations, which I have developed in great detail elsewhere.⁵⁵ A first point is that the complexity of these formations easily camouflages their predatory character: there is often no self-evident brutality as we might see it in a sweatshop. On the contrary, the key components include elements from some of the most admirable forms of complex knowledge and technologies we have generated: elements, and only that, from advanced versions of law and accounting, from specific technical capacities, from algorithmic mathematics, from high-level logistics and so on. These formations include powerful elites and owners of capital, but also these are partial factors in their functioning; one way of understanding this partial character is that even if we eliminated such owners and managers, we would not ipso facto eliminate these predatory formations. Major capital owners and major managers matter in the current shaping of economies, but by themselves they could not have achieved the extreme concentration of wealth and unaccountable power they now have across the world. This mix of elements and its guiding logics has led to escalated systemic capacities for massive capture at the top, environmental destruction on a scale we have not seen before, and a significant rise in the expulsion of people from reasonable life options even in rich countries.

An important feature of these predatory formations is that they are systemic. They are not elementary power grabs. They are constituted through the incorporation of elements from key domains and capabilities of our current leading economies and societies; as already mentioned, they include pieces of diverse core forms of knowledge and organisational alignments. We might contrast this systemic aspect with the image of an invader who comes, grabs and leaves with the loot rather than using what was grabbed to build something new in situ. Further, their existence also signals that simply getting rid of the rich is not enough to neutralise these formations. These formations are mostly beyond the reach of the usual policy responses, especially given the tendency in policy-making towards constructing silos for each policy domain. In sharp contrast, the emergent formations that concern me here cut across such domains and basically reassemble pieces of each domain into novel formations. Contesting or eliminating such complex mixed assemblages of core elements would require

55 Saskia Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008; Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.

the will to disassemble them or destroy them, though there is always the possibility of auto-destruction since they tend to abuse their own power.⁵⁶

Here I will focus on a few key elements of one of the major predatory formations of our times that is also among the most complex ones: (high) finance. The usual way of understanding finance is through a particular set of high-end components: some of the most advanced uses of digital technologies, the mathematics of physics rather than the more elementary math of standard economics, practitioners which include some of the best minds and so on.⁵⁷ This is correct as far as it goes, but it is, I argue, an incomplete representation of the domain. The notion I develop in this article, to wit, that we can link finance with extreme degradation, as has been done, for instance, with corporations that outsource manual work,⁵⁸ is not part of the general scholarship about finance nor is finance usually linked to degraded manual labour. In this, finance is also a contrast with many advanced economic sectors where we can make such links easily, notably the degraded and unhealthy moments in the production of advanced electronic components.

To incorporate physical degradation in the case of the financial sector requires expanding the understanding of finance so we can get at a far more inclusive assemblage of elements than is usual in studies of finance. Further, this expanded assemblage can include some very elementary components rarely associated with finance. Constructing such an expanded domain for finance makes visible that even extremely complex and sophisticated financial instruments can actually include some very elementary and brutal steps in their production process and highly degraded socio-economic outcomes. My effort here is, then, to capture a more encompassing operational field for finance: an assemblage of algorithmic math and advanced technologies that finds the grist for its mill by incorporating very modest elements at the other extreme of the knowledge and technical vector.

There are other such much admired and respected domains typically represented by complex forms of knowledge, which can also be shown to function in a far more expansive operational space than is usual, a space that can include extreme degradation—that is, that includes elements typically left out of the description, understanding and content of that domain. I argue that we need to re-position such domains in ways that allow us to capture the full operational space through which they are constituted. The tendency is to go in the opposite direction: separate the most complex moment of knowledge and sophistication from other

56 A fuller development of this methodology and conceptualisation can be found in Saskia Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008.

57 There is a rapidly growing scholarship on financial institutions and markets that has made critical contributions to our understanding of high finance. Representatives of diverse approaches are, for example, D. MacKenzie, F. Muniesa, & L. Siu (eds), *Do Economists Make Markets? On the Performativity of Economics*, Princeton, NJ: Princeton University Press, 2007; K. Knorr Cetina & A. Preda (eds), *The Oxford Handbook of the Sociology of Finance*, New York: Oxford University Press, 2013; B. Eichengreen, *Global Imbalances and the Lessons of Bretton Woods*. Cambridge, MA: MIT Press, 2010; C. Zaloom, *Out of the Pits: Traders and Technology from Chicago to London*, Chicago, IL: University of Chicago Press, 2006; M.S. Fisher & G. Downey (eds), *Frontiers of Capital: Ethnographic Reflections on the New Economy*, Durham, NC: Duke University Press, 2006; G.R. Krippner, *Capitalizing on Crisis: The Political Origins of the Rise of Finance*, Cambridge, MA: Harvard University Press, 2011, and the special issue of the journal *Globalizations: Globalization and crisis*, *Globalizations*, 7.1-2 (2010).

58 E.g. A. Aneesh, 'Global Labor: Algoric Modes of Organization', *Sociological Theory* 27.4 (2009), pp. 347–370; L. Beneria & S. Feldman (eds), *Unequal Burden: Economic Crises, Persistent Poverty, and Women's Work*, Boulder, CO: Westview Press, 1992; U.S. Department of State, 'Trafficking in Persons Report', *United States of America Department of State*, 2015, <http://www.state.gov/documents/organization/245365.pdf>; World Bank, 'Global Monitoring Report 2015/2016: Development Goals in an Era of Demographic Change. A World Bank Group Flagship Report', *World Bank*, 2015, <http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/503001444058224597/Global-Monitoring-Report-2015.pdf>.



moments that often contain elementary physical degradation.

We need to recover the full geographies of our leading contemporary economic sectors. Elsewhere,⁵⁹ I have examined a range of advanced sectors through the framing of such expanded operational fields. Seen from the other end—the degraded moment—we can see a similarly unilateral focus in much research on such practices as outsourcing.

The question I examine in this article actually plays out in diverse domains. One such formation includes the familiar practice we call outsourcing. There is a vast body of research and information on outsourcing and its exploitative and brutal features. I add to this focus on the actual tasks and workers the larger formations within which these function. The execution of that outsourcing includes brilliant engineering, logistics, lawyering, accounting and negotiations with host governments to push for weakening some of their laws and environmental standards. Further, one of the key logics, mostly unrecognised because the focus is on the brutality of outsourcing, is that stock markets register a firm's willingness to outsource as a positive indicator that can, hence, raise stock values⁶⁰ because it shows that the firm is willing to cut whatever costs it can in order to raise profits. In short, the argument I develop here for financial instruments also holds for other types of advanced economic sectors. Another example is the world of the cargo ship-making industry. Building these huge ships involves extraordinary engineering, advanced materials science, specialised knowledge about oceanic streams and physics. But when the ships become obsolete, they are often taken to countries with much low-wage labour, notably India, and dismantled by hand—an extremely exploited workforce, with no proper protections essential to this work (protections from cuts, toxic materials, etc.) and with no regard to the poisonous environment. In short, an extraordinary product of complex forms of knowledge contains within it a zone of extreme degradation of workers and the environment.⁶¹

In what follows, I focus on one specific case in finance. It captures the extent to which finance is actually bi-modal. We cannot fully understand finance if we keep representing it only through its most advanced components. The case I discuss here contains two extremes: an admirably complex instrument applied to a simple x in a brutal way in order to secure a positive outcome for finance. This is a different assemblage of elements from the more familiar ones we see, for example, in studies of outsourced work in low-wage countries, a focus that dominates the larger subject.

59 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.

60 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014, pp. 12–79.

61 There is an extensive scholarship that has over the decades documented this type of tension between countries with high technical capacities that use degraded labour in poorer countries and in that process also destroy the natural wealth of poor countries (E. Galeano, *Open Veins of Latin America: Five Centuries of the Pillage of a Continent*, New York, NY: Monthly Review Press, 1997; *Globalizations*, 7.1–2 (2010); Jubilee Debt Campaign UK, 'How Big is the Debt of Poor Countries?' *Jubilee Debt Campaign*, 2013, <http://jubileedebt.org.uk/faqs-2/how-big-is-the-debt-of-poor-countries>; W. Mignolo, 'Delinking: The Rhetoric of Modernity, the Logic of Coloniality, and the Grammar of De-Coloniality', *Cultural Studies*, 21.2 (2007), pp. 449–514; A. Quijano, 'Coloniality of Power, Eurocentrism, and Latin America', *Nepantla: Views from the South* 1.3 (2000), pp. 533–580; Saskia Sassen, 'Two Stops in Today's New Global Geographies: Shaping Novel Labor Supplies and Employment Regimes', *American Behavioral Scientist* 52.3 (2008), pp. 457–496.

From consumption to extraction

Over the last 30 years, finance has inserted itself in more and more domains of traditional banking. It has taken over functions from traditional banking that should have stayed there. Beyond banking, it has gained control over the logics organising many large corporations via its critical role as an intermediary economic sector—for instance, facilitating the merger of two large corporations, providing financing and specialised advice to firms that want to expand their global network of affiliates. Increasingly, it is also one of the best sectors for negotiating on behalf of client firms for better conditions by a host government. In short, besides the core financial function, the leading financial firms in any country today have economic and political roles. Finance has become a critical vector especially in the economies of developed countries. It is this expanded operational space that leads me to argue that we need a sharp differentiation between finance and traditional banking. One way of conceiving of this difference can be simply put as follows. Traditional banking sells something it has (money) for a price (interest). Finance sells something it does not have, and therein lies both its complexity and brilliance, as well as its danger to other sectors: to do what it does, finance needs to develop instruments that allow it to invade other sectors in order to extract value from them, or, more concretely, to extract the grist for its mill. At its most brutal and innovative, I argue that finance is an extractive sector: once it has extracted what there is to extract, it moves on, leaving behind destruction. Yes, in this it is similar to mining, albeit dressed in much finer clothes. In contrast to finance, traditional banking gains when its borrowers grow, do well and keep borrowing. At its best, traditional banking enables others, while finance, at its best, destroys others to enable itself.⁶²

Extraction, this extreme aspect of finance, is present in a broad spectrum of its sub-sectors. It is a process that has gone through many phases. Elsewhere,⁶³ I have examined in great detail how finance evolved from the 80s to the current period. At the beginning, in the 80s, one dominant phase was the proliferation of mergers and acquisitions of major traditional corporations. The highly specialised services, most notably finance, were the key intermediaries. What stood out in that period were the massive profits of the intermediaries and the frequent losses of the two firms that finance (and other intermediary sectors) helped merge. It became clear that the intermediaries were extractive sectors that could not lose even if the firm resulting from the merger went bankrupt. Since then, finance has gone through several phases of quite extraordinary innovations and inventions. It wound up accumulating hitherto unheard of values, ranging from US\$630 trillion right before the 2008 crisis to well over US\$1 quadrillion today.⁶⁴

Here I want to focus in some detail on a specific type of financial operation, one marked by the deployment of its complex instruments to execute a brutally elementary extraction: the

62 It can be argued, and I have done so (2014, pp. 80-116), that, in principle, if an economy or a government could materialise that fictitious uber-value of finance into an actual operational field—clean-up of toxic dumps, building of good social housing, restoring infrastructure—it would be great. But the profits would be too small to persuade finance of the desirability of such general benefit projects.

63 Saskia Sassen, *The Global City: New York, London, Tokyo*, Princeton, NJ: Princeton University Press, 1991; Saskia Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008; Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.

64 These figures correspond to what is the standard measure for finance: the value of outstanding derivatives. For a full evolution of this history of innovations and inventions in the financial sector since the 80s, see Saskia Sassen, *The Global City: New York, London, Tokyo*, Princeton, NJ: Princeton University Press, 1991, pp. 64-84; Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014, pp. 117-148.



so-called sub-prime mortgage innovation sold to about 15 million mostly modest-income households in the USA, of which 14 million wound up losing their homes according to the US Federal Reserve Bank.⁶⁵ At the other end, many high-level investors secured high profits by buying and promptly selling the instruments representing those mortgages—which, strictly speaking, contained only bits of each of the houses represented. Those who kept the mortgages on their roles, usually more traditional firms, had significant losses and many went bankrupt. This particular instrument has now spread to Europe where, overall, millions of households have now also lost their homes in countries as diverse as Hungary and Germany. The sub-prime mortgage is often described as the source of the 2008 crisis. This is only true as an ironic component of the crisis: the sub-prime mortgage crisis produced a crisis of confidence among financial firms and major investors. Its value was too small (maximum US\$800 billion dollars) to generate a crisis in a sector whose overall value stood at US\$630 trillion. It was the credit-default crisis of 2008, valued at US\$62 trillion that created the 2008 financial crisis.

The sub-prime mortgage crisis is a case that makes visible several key features easily rendered invisible in operations where the sites for extraction are powerful firms, investors or governments. Altogether, the elements in play are a very specific type of socio-technical assemblage. My aim is to bring to the fore the institutional spaces of finance through the notion of an operational field, rather than focus only on firms and markets. The argument is that global finance has de-bordered the narrowly defined notion of financial firms and markets, and financial institutions generally. It is not so much about institutions as about a larger assemblage of institutional, technical and geographic components.⁶⁶ These components include, among others, a broad range of financial and non-financial institutions, different types of jurisdictions, technical infrastructures and public and private domains. Housing, the focus here, fits into the case of private domains, a vast domain where housing is a very minimal component, especially given the modest property values in play. These features bring to the fore the aggressive pursuit of profits by finance, no matter how modest the assets, and, further, the extent to which finance is, as per my analysis, an extractive sector that leaves behind devastation.

Modest housing feeds a leveraged instrument

The 80s saw the financial industry produce multiple innovations that allowed the securitising of all sorts of debt.⁶⁷ These innovations also addressed small debts, notably individual consumer

65 There is by now a considerable critical scholarship on this subject, for example, K.F. Gotham, 'The Secondary Circuit of Capital Reconsidered: Globalization and the US Real Estate Sector', *American Journal of Sociology* 112.1 (2006), pp. 231–275; D. Immergluck, *Foreclosed: High-Risk Lending, Deregulation, and the Undermining of America's Mortgage Market*, Ithaca, NY: Cornell University Press, 2011; P. Langley, 'Securitising Suburbia: The Transformation of Anglo-American Mortgage Finance', *Competition & Change* 10.3 (2006), pp. 283–299; H. Schwartz, *Subprime Nation: American Power, Global Capital, and the Housing Bubble*, Ithaca, NY: Cornell University Press, 2009; and R.J. Shiller, *The Subprime Solution*, Princeton, NJ: Princeton University Press, 2008. None of this scholarship frames it the way I am framing it here: showing us something about the full operational space of finance, notably its capacity to include extremes at each, the high end and the low end.

66 Saskia Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008, pp 348–365. See also A. Aneesh, *Virtual Migration: The Programming of Globalization*, Durham, NC: Duke University Press, 2006; and A. Aneesh, 'Global Labor: Algoratic Modes of Organization', *Sociological Theory* 27.4 (2009) on such a type of analysis for other sectors.

67 For a discussion of the issues and the pertinent bibliography, see Saskia Sassen, *The Global City: New York, London, Tokyo*, Princeton, NJ: Princeton University Press, 1991, pp. 64–84.

debt, through the bundling of millions of such small debts, from auto loans to credit card debt. At that time, mortgages were mostly owned by highly regulated institutions and benefited from government protections. The deregulations that began in the 80s and multiplied after that became the critical step to enable a vast expansion in what could be securitised. In the case of mortgages, securitisation meant they had to be pulled out of their long-time protective encasements.⁶⁸

In the 2000s, housing became the instrument for yet another of the many innovations produced by the financial sector.⁶⁹ This innovation lengthened the distance between the financial instrument and the underlying asset (housing) to an extreme that is usually associated with high-risk innovative finance. This is not the first time the financial sector has used housing for such an instrument. The first residential mortgage-backed securities were produced in the late 70s. The original intention was quite reasonable: to generate an additional source for funding the mortgages of modest-income households, besides the traditional one of bank deposits. What I focus on here is different and has little connection to that older instrument. The sub-prime mortgage developed in the early 00s was a particular kind of distortion of that original 70s concept in that its aim was not to enable access to housing. Its aim was and is to use the actual physical good (the house) to develop an asset-backed security. Conceptually, I situate the current disastrous outcome for these households—millions losing their homes—as one component in the design of the instrument rather than as an accident or unforeseen effect. The instrument's purpose for the financial sector had nothing to do with the provision of housing. Housing was used to meet the demand from the high-level investment sector for an actual asset in the securities they were buying; they did not want yet another derivative based on an interest rate in turn based on another derivative, and so on, in an endless chain of elusive probabilities.

The conceptual setting for this proposition comes from an older book⁷⁰ where I develop a theory of change that has as one core dynamic the fact that condition x or capability y can shift organising logics and, thereby, actually change valence even if it may look the same. Thus, in the case of the focus in this article, I posit that specific capabilities, that is, sub-prime mortgages, were shifted to a different organising logic from that of the older 70s type mortgages, and that this specific shift led to the elimination of supports for mortgage holders because the new logic of the financial sector did not reside in the provision of housing but in the expansion of securities markets. Thus, the expanding market for asset-backed securities—that is, the organising logic—marked the house as a material asset that could be made into an asset-backed security (and, further, spliced into multiple bits to expand the number of such securities), mixed up with high-grade debt (to ensure a good rating) and deployed immediately,

68 M.B. Aalbers, 'The Financialization of Home and the Mortgage Market Crisis', *Competition & Change*, 12.2 (2008), pp. 148–166; K.F. Gotham, 'The Secondary Circuit of Capital Reconsidered: Globalization and the US Real Estate Sector', *American Journal of Sociology* 112.1 (2006), pp. 231–275; D. Miles, 'European Economics: Financial Innovation and European Housing and Mortgage Markets', *Morgan Stanley Research Europe*, 18 July 2007, <http://www.germany-re.com/files/00034800/MS%20Housing%20Report%202007.pdf>; K. Newman, K., 'Post-Industrial Widgets: Capital Flows and the Production of the Urban', *International Journal on Urban and Regional Research* 33.2 (2009), pp. 314–331.

69 M.B. Aalbers, 'The Globalization and Europeanization of Mortgage Markets', *International Journal of Urban and Regional Research* 33.2 (2009), pp. 389–410; M.B. Aalbers (Ed.), *Subprime Cities: The Political Economy of Mortgage Markets*, Hoboken, NJ: Wiley-Blackwell, 2012. There is a theorised analysis of some of the foundational intersections of urban space and profit that provides a more generic set of narratives, far less focused on the specifics of instruments, as I do here (see, e.g., Corbridge, Martin & Thrift, 1994; Newman, 2009; SAIS Review, 2009; Sassen, 1982, 1991, 2013).

70 Saskia Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008.



that is, sold to investors. This operation could be executed, at the limit, in a few days or weeks, after which the asset-backed security passed on to a new owner who could operate under a similar logic. Billions were made in this way all based on very modest assets. As in a game of musical chairs, those who got hit by the crisis were those who still owned those securities.⁷¹ Elsewhere,⁷² I argue that the organising logic of this post-Keynesian period is now making legible its shape: at the centre of this logic is not the ‘valuing’ of people as consumers, but the extraction of value through a proliferation of complex instruments. The particular case of the sub-prime mortgage crisis can be conceptualised as one instance of systemic expulsion through the extension of an advanced mode of capitalist relations of production, in this case, specifically the financialising of non-financial domains; this financialising includes largely major economic sectors such as commodities, for example, oil and metals, and corporate real estate. Out of these well-established markets emerged the possibility of extending this particular type of financial instrument to modest-income households. Further, the latter market can go worldwide given low levels of home ownership in many countries⁷³ and the fact that even if households fail to pay the mortgage, financial profiteers will have made their sales of asset-backed securities.⁷⁴ In short, this is an assemblage of elements that has benefitted from brilliant minds in order to execute a very elementary extraction.

On the occasion of his departure from Federal Reserve, Bernanke, the retiring head, described many positives. But at one point he emphasised two conditions he described as intractable and the source of much malaise. One of these two was the fact of 14 million households losing their homes. The other was the proliferation of ‘dark pools’—private trading networks owned and run by major banks over which central banks have little power and about which they know very little⁷⁵ I mention this to set a larger stage for what might be incorrectly seen, and has been so seen, as a private problem of a few million modest-income households.

When modest neighbourhoods become a strategic space for global finance

Modest neighbourhoods became a strategic space in this process, pushing the role of urban space as a source of profit well beyond the gentrification dynamic. The asymmetry between the worlds of investors (only some will be affected) and homeowners (once they default, they can lose the house and whatever they have already paid on it regardless of what investor

71 There is a very informative and critical scholarship focused on mortgages, including the sub-prime type, including with an international perspective (see, e.g., M.B. Aalbers, ‘The Globalization and Europeanization of Mortgage Markets’, *International Journal of Urban and Regional Research* 33.2 (2009), pp. 389–410; K.F. Gotham, ‘The Secondary Circuit of Capital Reconsidered: Globalization and the US Real Estate Sector’, *American Journal of Sociology* 112.1 (2006), pp. 231–275; D. Hammel, M. Moos, E. Kabahizi & E. Wyly, ‘Cartographies of Race and Class: Mapping the Class-Monopoly Rents of American Subprime Mortgage Capital’, *International Journal of Urban and Regional Research* 33.2 (2009), pp. 332–354; P. Langley, ‘Securitising Suburbia: The Transformation of Anglo-American Mortgage Finance’, *Competition & Change* 10.3 (2006), pp. 283–299; D. Miles, ‘European Economics: Financial Innovation and European Housing and Mortgage Markets’, *Morgan Stanley Research Europe*, 18 July 2007, <http://www.germany-re.com/files/00034800/MS%20Housing%20Report%202007.pdf>).

72 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014, pp. 12–79, 117–148.

73 E.g., Saskia Sassen, ‘Two Stops in Today’s New Global Geographies: Shaping Novel Labor Supplies and Employment Regimes’, *American Behavioral Scientist* 52.3 (2008), pp. 457–496.

74 One feature that unwittingly undermined this aim, and which became catastrophic for investors once some of these mortgages failed, was that it became impossible to isolate the mortgage slice because it was mixed with so many diverse types of debt. And this in turn was due to the fact that this mixing with high-value debt aimed at hiding the low value of the slice of ‘asset’.

75 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014, pp. 142–145.

happens to own the instrument at the time) creates a massive distortion in the housing market and the housing finance market.⁷⁶ Most investors can escape the negative consequences of home mortgage default because they buy these mortgages in order to sell them; there were many winners among investors for several years and only a few losers before the crisis broke in August 2007. But homeowners unable to meet their mortgage obligations cannot escape default. The fact that investors could have a positive view of sub-prime mortgages (poor-quality instruments) was bad for potential homeowners. We see here yet another sharp asymmetry in the position of the diverse players 'enacting' an innovation.

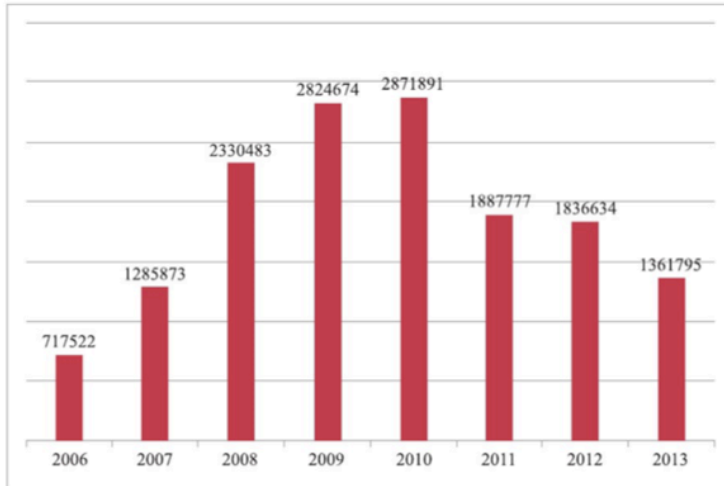
The following graphs show the numbers involved in what became a catastrophic event, reaching its high point in 2005 and 2006. The figures in Figure 1 are for foreclosures, which is basically a notice. They are based on data from the Fed, which shows that most of these became a loss of the house mostly ending in evictions. As already mentioned, in his final public overview of the state of it all, Bernanke said that over 14 million households had lost their homes. Figure 2 shows that this sub-prime mortgage crisis accounted for a significant debt compared to a series of other types of debt each of which contributed to a crisis. We should clarify that debt is a different measure than the 'value of finance as measured by outstanding derivatives' which, as indicated earlier in this text, by 2007 stood at US\$630 trillion. Against this context, the losses of US\$800 billion on the sub-prime mortgage crisis are minimal from the perspective of finance. Nonetheless, it added to the growing discomfort in the financial system about dubious quality of debt, and helped accelerate, and even tip finance into crisis, with the US\$62 trillion credit-default crisis. Clearly, these more recent crises operate at orders of magnitude that represent a massive scale-up in the numbers.

76 I find it important to remind us all that the governments and corporations of the Global North have long deployed equivalent tactics in the Global South, albeit in very different domains and through very different instruments. But debt was always one of those, even if it was a simpler type of debt that made itself quite visible (e.g., IMF, 'Chapter 1: Assessing risks to global financial stability', *Global financial stability report*, 2008, <http://www.imf.org/external/pubs/ft/gfsr/2008/01/PDF/chap1>; IMF, 'Debt Relief under the Heavily Indebted Poor Countries (HIPC) Initiative', *International Monetary Fund factsheet*, 17 September 2015, <http://www.imf.org/external/np/exr/facts/hipc.htm>; Jubilee Debt Campaign UK, 'How Big is the Debt of Poor Countries?' *Jubilee Debt Campaign*, 2013, <http://jubileedebt.org.uk/faqs-2/how-big-is-the-debt-of-poor-countries>; Saskia Sassen, 'Recomposition and Peripheralization at the Core', in M. Dixon & S. Jonas (eds), *The New Nomads: Immigration and Change in the International Division of Labor*, San Francisco, CA: Synthesis, 1982, pp. 88-100; Saskia Sassen, *The Global City: New York, London, Tokyo*, Princeton, NJ: Princeton University Press, 1991; Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014; UNCTAD, 'World Investment Report 2015: Reforming International Investment Governance', *United Nations Conference on Trade and Development*, 2015, http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf; UNDP, 'Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience', *UNDP Human Development Report*, 2014, <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>; United Nations Statistics Division, 'Millennium Development Goals Indicators', *United Nations MDG Indicators*, 2015, <http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=655&crd=>.



8 ■ Saskia Sassen

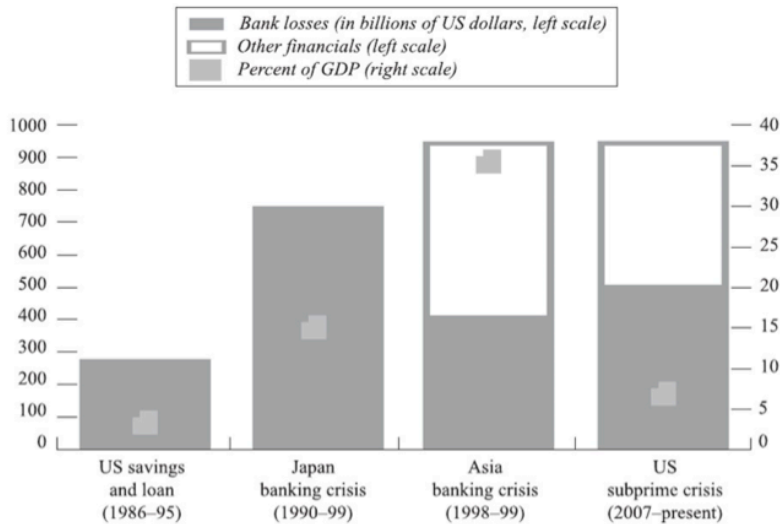
Figure 1
Number of US Properties with Foreclosure Filings (2006–2013)



Source: Consolidated data from the Federal Reserve Bank, organised by RealtyTrac (2008, 2009, 2010, 2012, 2013, 2014, 2016).

Extending mortgages to modest-income households, in itself a worthy objective, became a dangerous innovation. Since creditworthiness is not the issue with these mortgages, but numbers sold is, the likelihood that a borrower would eventually be unable to pay the mortgage was high. As with home equity loans, lenders often pushed these mortgages onto households, without full disclosure of the risks and changes in interest rates involved, and without taking account of the capacity of a household to meet the monthly mortgage payments.

Figure 2
Comparison of Financial Crises



Source: World Bank and IMF staff estimates (IMF, 2008). Note that 'present' here is 2008. Retrieved February 2016, from <http://www.imf.org/external/pubs/ft/gfsr/2008/01/PDF/chap1.pdf>. Reproduced by permission of the International Monetary Fund.

Under these conditions, sub-prime and similar kinds of mortgages for modest-income households became a mechanism for extracting something from those households, a sort of primitive accumulation.⁷⁷ At its most brutal, the object of this extraction was a contract (the mortgage agreement) that represented an asset. And all that was needed, given financial engineering, was for the household to sign that contract—nothing more and nothing less. As already explained, the key aim was securing the contract, not the actual payment of the mortgage; the intermediaries securing the contracts each needed to get 500 such contracts signed per week to make it all work.

The available evidence does suggest that race and locality are among the variables at work in this process. Newman⁷⁸ provides an important datum in this regard: a significant share of those who got sub-prime mortgages could have qualified for regular mortgages, a fact that eventually led to lawsuits, but the financial sector had by then succeeded in its narrow utilitarian objective.

77 Saskia Sassen, *Cities in a World Economy*, Thousand Oaks, CA: SAGE, 2011.

78 K. Newman, K, 'Post-Industrial Widgets: Capital Flows and the Production of the Urban', *International Journal on Urban and Regional Research* 33.2 (2009), pp. 314-331.



Tables 1–3 capture the 2000–2007 period and the moment when the abuse of the concept of the sub-prime mortgage has exploded, and the sellers are aggressively seeking and getting those signatures in 2006 and 2007. Table 1 shows the extreme difference between Manhattan (one of the richest counties in the whole country despite having significant pockets of poverty) and other New York City counties.

Table 1
New York City, Rate of Sub-prime Lending by Borough, 2002–2006 (in per cent)

	2002	2003	2004	2005	2006
Bronx	14.2	19.7	28.2	34.4	27.4
Brooklyn	9.2	13.9	18.4	26.1	23.6
Manhattan	1.3	1.8	0.6	1.1	0.8
Queens	7.7	12.6	17.8	28.2	24.4
Staten Island	7.2	11.1	13.9	19.9	17.1
NYC Total	7.0	10.8	14.9	22.9	19.8

Source: Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

Table 2
Ten New York City Community Districts with the Highest Rates of Sub-prime Lending, 2006

Sub-borough Area	Percentage of Home Purchase Loans Issued by Sub-prime Lender
University Heights/Fordham (Bronx)	47.2
Jamaica (Queens)	46.0
East Flatbush (Brooklyn)	44.0
Brownsville (Brooklyn)	43.8
Williamsbridge/Baychester (Bronx)	41.6
East New York/Starrett City (Brooklyn)	39.5
Bushwick (Brooklyn)	38.6
Morrisania/Belmont (Bronx)	37.2
Queens Village (Queens)	34.6
Bedford Stuyvesant (Brooklyn)	34.2

Source: Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

Table 3
Rate of Sub-prime Lending by Race in New York City, 2002–2006 (in per cent)

	2002	2003	2004	2005	2006
White	4.6	6.2	7.2	11.2	9.1
Black	13.4	20.5	35.2	47.1	40.7
Hispanic	11.9	18.1	27.6	39.3	28.6
Asian	4.2	6.2	9.4	18.3	13.6

Source: Furman Center for Real Estate & Urban Policy, 2007a, State of New York City's housing and neighbourhoods (<http://furmancenter.org/research/sonychan/2007-report/>, accessed 8 February 2016).

Thus, in 2006, less than 1 per cent of mortgages sold to Manhattan homebuyers were sub-prime compared to 27.4 per cent in the Bronx. This table also shows the sharp rate of growth over the years of sub-prime mortgages in all boroughs except Manhattan. Table 2 provides a more detailed map of neighbourhoods within boroughs. Table 3 shows that whites were the least likely to get sub-prime mortgages and that African Americans had a disproportionately high incidence of such mortgages as a share of all the mortgages bought by each of the four groups listed. One pragmatic interpretation is that minoritised households were far less likely to own a house already, so they became those easiest to persuade to sign. Whites, who have a far higher average income than all the other groups in New York City, were far less likely to have sub-prime mortgages than all other groups. Thus, of all mortgages bought by Whites in 2006, 9.1 per cent were sub-prime, compared with 13.6 per cent for Asians, 28.6 per cent for Hispanics and 40.7 per cent for Blacks. This table also shows the much lower growth rate in sub-prime lending from 2002 to 2006 among Whites compared with the other groups. In the most acute period, 2003–2006, it doubled from 4.6 per cent to 9.1 per cent for Whites, but basically tripled for Asians and Hispanics, and quadrupled for Blacks.

The costs extended to whole metropolitan areas. The loss of property tax income for municipal governments varied across different types of cities and metro areas. One study of ten metro areas with the largest losses of real gross municipal product (GMP) for 2007 due to the mortgage crisis estimates their total economic loss at over US\$45 billion (Global Insight, 2007). New York City losses were estimated at US\$10 billion, Los Angeles at US\$8.3 billion and Dallas, Washington and Chicago each at about US\$4 billion.

Conclusion

The innards of an insidious instrument of enormous complexity

This insidious instrument is part of a longer history of specific types of innovations. The outcome of these complex creations and manipulations was disastrous for over 14 million households in the United States.

Two features of the innovation at issue here—the so-called sub-prime mortgage—make these sub-prime mortgages radically different from traditional mortgages. One is the extent to which these mortgages function as a financial item that can be bought and promptly sold. In a fast-moving market of buying and selling, ownership of the instrument may last for just 2 hours. Thus, when an investor has sold the instrument, what happens to the house itself becomes irrelevant to that investor; indeed, the lenders and sellers of sub-prime mortgages who went



bankrupt in the 2007 sub-prime mortgage crisis where those who had not sold mortgages they had issued and, perhaps, were going to sell soon. Those who did sell them to other investors made significant profits. Further, these mortgages were mostly divided into hundreds of slices, which were then mixed up with high-grade debt and distributed across diverse investment packages; they could then be sold as asset-backed securities, no matter how thin and how dubious that slice of a mortgage representing an actual material asset—which might not even have been a whole house but just a thin slice of the house. Often, there is no single component in such a package that actually represents the whole house. In sharp contrast to the business side, the owner loses the house if unable to meet the mortgage payments for a few months no matter who owns the instrument—the original seller or some other intermediary. There is always some investor or ‘servicer’ who owns it and hence can make claims, no matter how many times the mortgage has changed hands in the financial world. When the crisis hit, some of these holders lost all the value they had put into acquiring the mortgages or for developing them.

The second difference from traditional mortgages is the fact that the source of profit for the investor is not the payment of the mortgage itself plus interests. It is, rather, the desirability of having an actual asset (in this case, a bit of a house) backing the security in a period of extreme speculation when asset-backed securities had become rare in the high-finance circuit. And the aim of the innovation is to delink investor profits from the creditworthiness of the sub-prime mortgage borrower—the investor could benefit even if the mortgaged household went bankrupt, as long as that investor in turn had sold it. The critical condition to make it work for the high-finance investment circuit is securing a large number of sub-prime mortgage contracts to reach the volumes needed, and then sell those mortgages to other investors. Again, it was only those investors who hung on to the mortgages who suffered losses. These two features suggest that the estimated 2 billion modest-income households that exist worldwide are a potential global market for what has become a dangerous instrument not aimed at helping such households but rather at filling a demand in the high-finance circuit.⁷⁹ This population sector can become a major target because the source of profit is not the payment of the mortgage itself but the sale of a highly liquid financial package with a bit of material asset—a little piece of the little house! What counts is not the creditworthiness of the ‘little’ borrower but crossing a threshold in terms of numbers of mortgage contracts sold to, and often pushed onto, households. It is one of the most radically brutal uses of modest-income households I have seen in the financial sector.

79 Saskia Sassen, ‘Two Stops in Today’s New Global Geographies: Shaping Novel Labor Supplies and Employment Regimes’, *American Behavioral Scientist* 52.3 (2008), pp. 457–496; Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.

References

- Aalbers, M.B. 'The Financialization of Home and the Mortgage Market Crisis', *Competition & Change*, 12.2 (2008), pp. 148–166.
- 'The Globalization and Europeanization of Mortgage Markets'. *International Journal of Urban and Regional Research* 33.2 (2009), pp. 389–410.
- (Ed.), *Subprime Cities: The Political Economy of Mortgage Markets*, Hoboken, NJ: Wiley-Blackwell, 2012.
- Aneesh, A. *Virtual Migration: The Programming of Globalization*, Durham, NC: Duke 'Global Labor: Algoratic Modes of Organization', *Sociological Theory* 27.4 (2009), pp. 347–370.
- Beneria, L., & S. Feldman (eds), *Unequal Burden: Economic Crises, Persistent Poverty, and Women's Work*, Boulder, CO: Westview Press, 1992.
- Corbridge, Martin & Thrift, 1994; Newman, 2009
- Eichengreen, B. *Global Imbalances and the Lessons of Bretton Woods*. Cambridge, MA: MIT Press, 2010.
- Fisher, M.S., & G. Downey (eds), *Frontiers of Capital: Ethnographic Reflections on the New Economy*, Durham, NC: Duke University Press, 2006.
- Galeano, E. *Open Veins of Latin America: Five Centuries of the Pillage of a Continent*, New York, NY: Monthly Review Press, 1997.
- Globalizations*, 7.1-2 (2010).
- Gotham, K.F., 'The Secondary Circuit of Capital Reconsidered: Globalization and the US Real Estate Sector', *American Journal of Sociology* 112.1 (2006), pp. 231–275.
- Hammel, D., M. Moos, E. Kabahizi & E. Wyly, 'Cartographies of Race and Class: Mapping the Class-Monopoly Rents of American Subprime Mortgage Capital', *International Journal of Urban and Regional Research* 33.2 (2009), pp. 332–354.
- IMF, 'Chapter 1: Assessing risks to global financial stability', *Global financial stability report*, 2008, <http://www.imf.org/external/pubs/ft/gfsr/2008/01/PDF/chap1>.
- 'Debt Relief under the Heavily Indebted Poor Countries (HIPC) Initiative', *International Monetary Fund factsheet*, 17 September 2015, <http://www.imf.org/external/np/exr/facts/hipc.htm>.
- Immergluck, D. *Foreclosed: High-Risk Lending, Deregulation, and the Undermining of America's Mortgage Market*, Ithaca, NY: Cornell University Press, 2011.
- Jubilee Debt Campaign UK, 'How Big is the Debt of Poor Countries?' *Jubilee Debt Campaign*, 2013, <http://jubileedebt.org.uk/faqs-2/how-big-is-the-debt-of-poor-countries>.
- Knorr Cetina, K., & A. Preda (eds), *The Oxford Handbook of the Sociology of Finance*, New York: Oxford University Press, 2013.
- Krippner, G.R. *Capitalizing on Crisis: The Political Origins of the Rise of Finance*, Cambridge, MA: Harvard University Press, 2011.
- Langley, P. 'Securitising Suburbia: The Transformation of Anglo-American Mortgage Finance', *Competition & Change* 10.3 (2006), pp. 283–299.
- MacKenzie, D., F. Muniesa, & L. Siu (eds), *Do Economists Make Markets? On the Performativity of Economics*, Princeton, NJ: Princeton University Press, 2007.
- Mignolo, W. 'Delinking: The Rhetoric of Modernity, the Logic of Coloniality, and the Grammar of De-Coloniality', *Cultural Studies*, 21.2 (2007), pp. 449–514.
- Miles, D. 'European Economics: Financial Innovation and European Housing and Mortgage Markets', *Morgan Stanley Research Europe*, 18 July 2007, <http://www.germany-re.com/files/00034800/MS%20Housing%20Report%202007.pdf>.
- Newman, K. 'Post-Industrial Widgets: Capital Flows and the Production of the Urban',



- International Journal on Urban and Regional Research* 33.2 (2009), pp. 314–331.
- Quijano, A. 'Coloniality of Power, Eurocentrism, and Latin America', *Nepantla: Views from the South* 1.3 (2000), pp. 533–580.
- SAIS Review, 2009.
- Sassen, Saskia. 'Recomposition and Peripheralization at the Core', in M. Dixon & S. Jonas (eds), *The New Nomads: Immigration and Change in the International Division of Labor*, San Francisco, CA: Synthesis, 1982, pp. 88-100.
- The Global City: New York, London, Tokyo*, Princeton, NJ: Princeton University Press, 1991.
- 'Two Stops in Today's New Global Geographies: Shaping Novel Labor Supplies and Employment Regimes', *American Behavioral Scientist* 52.3 (2008), pp. 457–496.
- Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton, NJ: Princeton University Press, 2008.
- Cities in a World Economy*, Thousand Oaks, CA: SAGE, 2011.
- Expulsions: Brutality and Complexity in the Global Economy*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.
- Schwartz, H. *Subprime Nation: American Power, Global Capital, and the Housing Bubble*, Ithaca, NY: Cornell University Press, 2009.
- Shiller, R.J. *The Subprime Solution*, Princeton, NJ: Princeton University Press, 2008.
- U.S. Department of State, 'Trafficking in Persons Report', *United States of America Department of State*, 2015, <http://www.state.gov/documents/organization/245365.pdf>.
- UNCTAD, 'World Investment Report 2015: Reforming International Investment Governance', *United Nations Conference on Trade and Development*, 2015, http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf.
- UNDP, 'Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience', *UNDP Human Development Report*, 2014, <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>.
- United Nations Statistics Division, 'Millennium Development Goals Indicators', *United Nations MDG Indicators*, 2015, <http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=655&crid=>.
- World Bank, 'Global Monitoring Report 2015/2016: Development Goals in an Era of Demographic Change. A World Bank Group Flagship Report', *World Bank*, 2015, <http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/503001444058224597/Global-Monitoring-Report-2015.pdf>.
- Zaloom, C. *Out of the Pits: Traders and Technology from Chicago to London*, Chicago, IL: University of Chicago Press, 2006.

THE COLLECTIVE TURN IN FINANCE: ON COMMONFARE AND SOCIAL WALLET

(LOCAL) ANSWERS TO GLOBAL ECONOMY

Letizia Chiappini

*You must be very strong
to love solitude; you have to have good legs
and a resistance out of the ordinary; you should not risk
colds, flu and sore throat; you should not fear
robbers or murderers; if you have to walk
throughout the afternoon or maybe all night
you must do it without realizing it; to sit there.
- 'Loneliness', Pier Paolo Pasolini*

In a variation on the term techno-capitalism, Nick Srnicek coined the notion of 'platform capitalism' to describe the current economic system, in which vulnerable segments of society become excluded and penalized. There are fundamental forces at play that cause increasing inequalities, land grabs, financial crashes and natural disasters.

In her 2014 book *Expulsions*⁸⁰ Saskia Sassen describes the brutality and complexity in the global economy that result in expulsions—from professional livelihood, living spaces, and even from social life. Just think about employees in 24/7 supermarkets. Or the Foodora courier that has to work through the weekend and take night shifts for a few extra bucks. Gig economy platforms recruit workers with the false promise of being a self-entrepreneur who can work whenever they please, and as much as they like. Only after starting do these workers figure out that, at the end, they are often forced to work over the weekend and compete shamelessly with other.⁸¹

One might think that this is nothing new under the sun; the shift-system in factories during the Fordist era was tough period for the working class as well. There have always been brutalities which were reserved for a particular portion of society: the working class, the proletarians and those that are less privileged. In the post-war period of the welfare state, or the historical momentum of the class compromise, the pledge was to improve and dignify the living conditions of individuals through work. Given the technological upheavals that shape our 21st century, working conditions may further decrease.

Nowadays, in the Western landscape factories are disappearing. The advanced phase of post-Fordism has brought about differentiated modes of production and cultural consumption. The ownership and accumulation regimes are ambiguous in terms of distribution of resources and

80 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge: Harvard University Press, 2014.

81 Financial Times, 'Poor Worker Conditions Power Gig Economy | FR Alphaville', *You Tube*, 12 December 2016, <https://www.youtube.com/watch?v=zNLXqvPk2tU&feature=youtu.be>.



how commodities are being produced. Hence, in this disarray it is hard to tell who belongs to the working class and who is even less privileged. Even those who think they are not yet vulnerable might soon be consumed by burnout, depression and drug abuse. Take those who work in academia today, with its ‘publish or perish’ motto, which embodies the pressure to publish papers in peer-review journals. PhD students and researchers do not belong, by default, to the working class; they are considered high skilled workers that usually live in an expat bubble. They emigrate from their own countries to the ‘Nordic cognitive Eldorado’, to the ‘prosperous and meritocratic’ Global North. But what is the social cost for those who move abroad? Mark Fisher knew quite well at what cost: one’s life. It reminds us of the testimony by Richard Kadison, head of the mental health unit at Harvard University, according to whom the average student in the year 2000 had the same level of anxiety as the average psychiatric patient in 1950.⁸²

What we are witnessing here is a platoon of precarious individuals. Look at all the freelancers, knowledge workers, crafters, makers, artists and coders. The famous creative class that has been praised for its talent, technological innovation, tolerance and inclusiveness is now falling apart. In his 2017 book *The New Urban Crisis* Richard Florida expresses his *mea culpa* because cities in which there was a high concentration of the so-called creative class are now amongst the most polarized cities, such as San Francisco and London. It is not a coincidence that precisely in these metropolitan areas the ideology of sharing economy is so pronounced. If you just observe this historical tragedy without thinking about possible alternatives, life fades away. So, let’s envisage alternatives together and embark on this journey. Let’s see how some of us plant the seeds and contemplate how these alternatives grow. In this article we look at initiatives in Amsterdam and Milan that represent possible ways to resist expulsion and that design collective solutions.

From welfare state to Commonfare

Commonfare is a bottom-up and open platform, which adopts a cooperative approach to welfare in order to tackle different social issues. It is based on principles of re-appropriation of the commons, free access to basic needs, unconditional universal basic income and alternative financial flows.⁸³ Along these social justice principles there are challenges to address: precarity vs security, online vs offline engagement, overcoming apathy and learned helplessness. The mission here is to work through such ordinary dichotomies and make concrete steps forward. One example could be the concept of ‘commoncoin’. This collective form of money is more ‘a means of exchange to flow in alternative economic circuits, than a store of value for ordinary crypto-currency.’⁸⁴

For instance, in the Netherlands there is the phenomenon of the *broodfonds*, which is a collective that allows independent entrepreneurs to provide each other with temporary sick leave. The recommended minimum is 25 people; the maximum size is 50 people. From this perspective, Commonfare can be seen as a self-organized bottom-up version of social security. Another example is the social wallet, which is emblematic to understand

82 See the book by Richard Kadison:

<https://www.wiley.com/en-us/College+of+the+Overwhelmed%3A+The+Campus+Mental+Health+Crisis+and+What+to+Do+About+It-p-9780787981143>

83 Andrea Fumagalli and Stefano Lucarelli, ‘Finance, Austerity and Commonfare’, *Theory, Culture & Society* 32.7-8 (October 2015).

84 General Intellect, ‘Commonfare or the Welfare of the Commonwealth’, In: Inte Gloerich, Geert Lovink and Patricia de Vries (eds), *MoneyLab Reader 2: Overcoming the Hype*, Amsterdam: Institute of Network Cultures, 2018.

the potentiality within platforms like Commonfare. How can we re-think the extreme individualization of the subject into a social form of finance or incomes? Andrea Fumagalli asked this question in his 2018 book *Political Economy of the Common*.⁸⁵

The Social Wallet project

A social wallet is common place to store value, which is shared and accessible by a number of people. This can, for instance, be a group or collective that have the same interests or work on the same project. Let's discuss it in detail and look at it as a design artifact. Is it made of leather or is it just a pouch, or even a string of data? Now, let's take the traditional expression 'pocket money'. It doesn't matter if the pocket is in your jeans or if it is filed inside your smartphone. Of course, the main difference between the two is that in the traditional pocket there is a limited capacity to store cash and coins. In both cases, they are extremely private. A social wallet can, in theory, store both money and time. Although labor time is not the main value for the Social Wallet initiative, time is not used within the same logic of time-banking.⁸⁶ A time-based currency is an alternative currency or exchange system where the unit of account/value is the person-hour or some other time unit. Some time-based currencies value everyone's contributions equally: one hour equals one service credit.

The experimental phase of Social Wallet started in 2013 with a European Union project called D-CENT⁸⁷. This project itself was a collaborative policy-making tool. The initiative aimed to improve participatory design and digital tools for citizens, such as decentralized tools to engage individuals in public participation. The project aimed to build privacy-aware tools for direct democracy and economic empowerment. One of these tools was a digital wallet; which was initially called freecoin. The reason to develop this tool was to use it as an incentive for people to participate in policy-making processes. At that time there was a large monolithic application, namely a software project that included a system for authentication and authorization. Afterwards it was broken down in multiple modules.

At the time of writing in June 2018, Social Wallet is in a pilot stage. The core of the tool is entirely functional, the software developers keep improving and adding features in an agile way, as Aspasia Beneti, lead developer of the tool at Dyne.org, explained to me in an interview:

*One of the pilots is Macao in Milan. It is a collective of artists. They organize themselves in a very progressive way, for instance with distributing a basic income every month. They are trying different things. Before there was a person writing excel files and keeping notes manually. Now, they use an internal wallet to be more efficient. They have a full wallet running with a particular codebase adjusted for them. They use it to distribute the basic income but also to exchange coins when they organize events, they can also gain some more coins, for example by taking care of public space or by contributing to urban commons.*⁸⁸

85 'Political Economy of the Common', *P2PFoundation Wiki*, 10 June 2018, https://wiki.p2pfoundation.net/index.php?title=Political_Economy_of_the_Common&oldid=112364.

86 'Give one hour of service to another, and receive one time credit.' See: <https://timebanks.org>

87 See: <https://dcentproject.eu>.

88 The interview was conducted in Amsterdam in the office of Dyne.org, 6 June 2018.



Macao is a small community, which uses its own social wallet for internal purposes. This means they do not need an entire blockchain⁸⁹ system to organize their activities. The collective has chosen to go for internal transparency. One of the pillars of Social Wallet is to keep the system simple for users. There is the Social Wallet API, which is the main component, where anyone can create his or her own interface. It is generic and configurable. One could think of this as a niche product for an artist collective. That would be wrong however, it is much more! Let's look at another example, the Santarcangelo Festival,⁹⁰ another Macao spin off. Santarcangelo is one of the oldest theater festivals in Italy, founded in 1975. For the 2018 edition they expect about 10.000 visitors. Though their experiment is different from Macao, they both try to engage citizens in technological trials. Their main difference is the attempt to be more interactive with both visitors and retailers. For instance, Santarcangelo has an app for augmented reality to read the programme and the Santa Coin⁹¹ that is based on the Social Wallet API. One of the most interesting aspects is an adaptation for people that do not have a smartphone. Instead of a digital version, they provide a QR code, which can be printed on paper. At the entrance, visitors can exchange euros for Santa Coin. The coin can be used in bars and shops such as the hairdresser. From the organizers' perspective, this is the easiest way to check how much the turnover of the festival is and to what degree there is an impact on the local economy.

What's the difference between a social wallet and a token? Beneti explains:

There are a lot of similarities between the two. One of the main differences is that the social wallet is digitalized, so you don't have plastic, like token coins. It is more environmentally sustainable. It might be anything, a QR code printed on a piece of paper. It is reusable, so you can use it as a wallet. As an electronic wallet, it is an extension of the token because you can use it again and put more money on it. You can check your transactions and you can scan it. I think this is known as top-up in England. It is more transparent for the users and the festival. Another successful example is the Bristol pound, a printed alternative or complementary currency. Instead of going to Starbucks, one can support the local economy and use the alternative currency in small local shops. It increases the trust among the local community, and it has environmental benefits. In this way, people can be incentivised to consume local products.

Think of how pervasive your smartphone is and imagine a cashless society. This is already becoming a reality in some places. A city like Amsterdam wants to encourage individuals to use less and less cash. For instance, on the tram you can only pay by card. You can order food, pay Uber, transfer money to your friends after a dinner together, all thanks to your bank app. In Southern Europe, where the digital divide is still much higher, it is not so usual to transfer money to your friends through an app. A side effect of the use of bank apps might

89 In 2017, Macao asked Federico Bonelli (Dyne.org) to design a game that explains how blockchain works. The idea behind *Le Grand Jeu* is to familiarize people these new concepts, similar to Monopoly that explains how capitalism works. *Le Grand Jeu* is a great example that stands in contrast to the idea of traditional urban gamification. It is not about strengthening the existing smart city projects and therefore policies, but more about how things can be reimagined together. The purpose of the game was to simulate the future economy and play with its mechanisms. For example, in order to explain how sustainable energy works, the game comes up with a potential choice between different technologies. The aim would be to choose between them, which is best for a future society. Another aim is to organize human activities in a sustainable way in order to imitate the process of transition. One could compare this with grassroots community projects that aim to increase self-sufficiency (in this case related to climate change). See: www.transitionnetwork.org and: <http://www.macaomilano.org/spip.php?rubrique109>.

90 See: <https://www.santarcangelofestival.com>.

91 'Abbiamo Portato La Santa Coin al Festival: Sei Pronta/o?', *Santarcangelo Festival*, <https://www.santarcangelofestival.com/en/santacoin/>.

be an extra addiction to your smartphone, such as checking compulsively how much money there is on your bank account. It is an individual financial obsessive-compulsive disorder. Let's call this the Financial Self. It is a self that is constantly checking one's liquidity. Whether in past this was accessible exclusively for bankers and financial brokers, this has been democratized. Now you can behave like a banker scrolling down your Instagram feed one moment and your ING-app the next.

The idea of the social wallet is an explosive one, because it stops the individualization and the narrow space of 'me and my 25 euros on my ING-app'. The social wallet is an invitation to re-think finance in a collective way. The decision-making part is decentralized. Those who work for the social wallet are collective entities. The social move here is radical. In the common imaginary, finance has always been for brokers; think of Gekko in Wall Street or the Wolf of Wall Street. So far, global finance has been in the hands of a bunch of rich people that fight like sharks in an ocean of misery. Whereas Bitcoin is pitched to the financial elite as an alternative to the dominating currencies, the social wallet has no ambition to compete. Some might say that it is like Bitcoin. Nooooo! It is not. Bitcoin is an extension of the traditional finance ratio where the winner takes all. In this regard, the social wallet is similar to faircoin, which belongs to the world of coops and collectives, groups and communities that share what they produce. It has a redistributive effect within local economies. As Beneti remarks: 'The social wallet can connect with a blockchain (for example faircoin) and/or a local complementary currency using a database like for example the Commoncoin in case of the Commonfare platform or the Santacoin in case of the Santarchangelo festival. It is a generic tool that can be adapted according to needs.' The idea of the social wallet comes from the social movements!

How can initiatives like Social Wallet prevent the brutalities and expulsions of the global economy?

Social Wallet fits in a larger software ecology, often associated with the buzzword blockchain. Social Wallet is just one of the many tools in the toolbox. It represents an alternative and contributes to give collective, cooperative and economic foundation to different forms of community and self-organization. As Primavera De Filippi claims 'These organizations—which have no director or CEO, or any sort of hierarchical structure—are administered, collectively, by all individuals interacting on a blockchain. As such, it is important not to confuse them with the traditional model of 'crowd-sourcing', where people contribute to a platform but do not benefit from the success of that platform.'⁹²

Without becoming a believer or techno-savvy promoter, we might think about concrete solutions to avoid continuing the ocean of misery. Do we envision ourselves as a crew on Le Radeau de la Méduse or part of the victorious army of La Liberté guidant le peuple? Let's not picture our society as failure but rather emphasize our capacity to respond and stand up. Starting from small initiatives that fight the unicorns of platform capitalism.

92 Primavera De Filippi, 'What Blockchain Means for the Sharing Economy', *Harvard Business Review*, 15 March 2017, <https://hbr.org/2017/03/what-blockchain-means-for-the-sharing-economy>.



References

- 'Abbiamo Portato La Santa Coin al Festival: Sei Pronta/o?', *Santarcangelo Festival*, <https://www.santarcangelofestival.com/en/santacoin/>.
- De Filippi, Primavera. 'What Blockchain Means for the Sharing Economy', *Harvard Business Review*, 15 March 2017, <https://hbr.org/2017/03/what-blockchain-means-for-the-sharing-economy>.
- Financial Times, 'Poor Worker Conditions Power Gig Economy | FR Alphaville', *YouTube*, 12 December 2016, <https://www.youtube.com/watch?v=zNLXqvPk2tU&feature=youtu.be>.
- Fumagalli, Andrea, and Stefano Lucarelli, 'Finance, Austerity and Commonfare', *Theory, Culture & Society* 32.7-8 (October 2015).
- General Intellect, 'Commonfare or the Welfare of the Commonwealth', In: Inte Gloerich, Geert Lovink and Patricia de Vries (eds), *MoneyLab Reader 2: Overcoming the Hype*, Amsterdam: Institute of Network Cultures, 2018.
- Kadison, Richard, and Theresa Foy DiGeronimo. *College of the Overwhelmed: The Campus Mental Health Crisis and What to Do About It*, San Francisco: Jossey-Bass, 2004.
- 'Political Economy of the Common', *P2P Foundation Wiki*, 10 June 2018, https://wiki.p2pfoundation.net/index.php?title=Political_Economy_of_the_Common&oldid=112364.
- Sassen, Saskia. *Expulsions: Brutality and Complexity in the Global Economy*, Cambridge: Harvard University Press, 2014.

IMPROVISING BLOCKCHAINS

AN OVERVIEW AND ANALYSIS OF PERFORMANCE METHODS USED TO EXPLORE EMERGING DECENTRALIZED LEDGER TECHNOLOGIES IN THE ARTS

Max Dovey

An overview and analysis of performance methods used to explore emerging decentralized ledger technologies in the Arts.

An unexpected response to the insurgent proliferation of blockchain is the use of performance, role play and improvisational methods borrowed from theater to perform and role play different blockchain futures. This article sets out to catalog various examples and applications of performance – namely Live Action Role Play (LARP) and improvisation – that offer creative & practical methods for individuals to understand, develop and shape alternative applications of emerging blockchain technology as a system for social governance. Furthermore, the use of performance methods used within these communities to improvise and dramaturge alternative futures inspired by blockchain technology offers counter strategies for organizing alternative social relations based on human interaction and mediation rather than automated or algorithmic governance structures written into smart contracts and blockchain based applications.



Fig. 1. Illustrations by Maz Hemming for DAOWO Workshop #5 What Will It Be Like When We Buy An Island (on the blockchain)_1⁹³

93 See: <https://www.flickr.com/photos/153150564@N06/41929568682/>.



Distributed Ledger Technology (more commonly referred to as blockchains or DLTs) promises to transform the structural organization of digital information by storing a synchronized distributed database of time-stamped transactions on a network of computers. Initially used primarily as the underlying cryptographic architecture used to secure the cryptocurrency Bitcoin, the attributes of blockchains have received widespread interest by multi-national companies and global businesses worldwide, leading to millions of dollars getting invested into developing and integrating blockchains into business organizations as many believe blockchains will play an integral role in shaping the future of information systems.

The drive for blockchain technology to transform society more broadly can be observed in EU funded initiatives such as 'Blockchains for social good'⁹⁴ or NGO based research consortium's titled 'Blockchains and the Global South'⁹⁵. Within these initiatives many seek to develop and deploy blockchain technology to administer and deliver technological solutions to many 'real-world problems' (e.g. digital voting systems⁹⁶ or provide digital identification cards for foreigners or refugees⁹⁷). Within these areas of research & development the prevailing attitude is that engineers and developers will be able to solve many of the world's issues through blockchain-based applications. This is most explicit in the video trailer for the 'Blockchaingers hackathon'⁹⁸ where Rutger van Zuidam, Founder and CEO of Dutchchain and the blockchaingers, kicks off a weekend hackathon by telling the large audience 'you will be build these amazing solutions and you will take them far beyond this hackathon into *the real world*'. The repeated use of the phrase 'real-world' in this context is often used to describe specific sectors of industry such as energy, agriculture, healthcare and governments and provide the starting ground for developers to imagine and build blockchain based applications that disrupt or challenge how information systems are integrated into various industries.

94 'Blockchains for Social Good', *European Commission*, https://ec.europa.eu/research/eic/index.cfm?pg=prizes_blockchains.

95 Kate Symons, 'One-Day Conference on 22 May', *Oxchain*, 4 May 2018, <http://oxchain.uk/2018/05/04/one-day-conference-on-22-may/>.

96 Tonie McKay, 'How Blockchain Technology Can Transform Voting in Scotland', *Business for Scotland*, 12 October 2017, <http://www.businessforscotland.com/blockchain-technology-can-transform-voting-scotland/>.

97 See: <https://tse.bitnation.co/>.

98 Dutchchain, 'Blockchaingers Hackathon 2018 After Movie (Biggest Blockchain Hackathon in the World)', *YouTube*, 10 April 2018, <https://www.youtube.com/watch?v=4h87L6IRu0s&feature=youtu.be>.



Fig. 2. Illustrations by Maz Hemming for DAOWO Workshop #5 What Will It Be Like When We Buy An Island (on the blockchain)_2⁹⁹

What can be considered ‘the social turn’ in blockchain advancement, is the avocation and implementation of blockchain based applications such as smart contracts and distributed autonomous organizations (DAOs) into various industries and sectors from governments to healthcare to energy and agriculture. The repeated emphasis on building software applications for ‘the real-world’ in order to implement autonomous ‘turing complete’¹⁰⁰ computer code that can potentially administrate and govern individuals through a distributed database is a profoundly and wildly speculative proposition because there has yet to be a fully implemented and successful working use case for a DAO or a smart contract¹⁰¹. This is explicitly noticeable in the amount of articles headlined ‘How blockchain will change ...’ which frequently list baseless claims about the technology rather than actual functioning an deployed ‘real-world’ working use cases.

It is frequently stated that blockchain development is currently in a similar state to the internet in 1992¹⁰², hinting that while the widespread use for blockchains is relatively unknown it will regardless be as important and ground breaking as the internet played out to be. This type of speculative promise, where no one can guarantee how blockchains will revolutionize industries but are convinced by its potential, drives blockchain technology as a speculative vehicle with which to imagine various techno-social futures. Consequently the advancement of blockchain as a widespread system for social administration, business or governance still largely resides within the social & cultural imaginary of future speculations. Regardless of

99 See: <https://www.flickr.com/photos/153150564@N06/27105175557/>.

100 David Golumbia, ‘MoneyLab#2: David Golumbia. Blockchain: Revolution or Business as Usual?’, *Vimeo*, 3 December 2016, <https://vimeo.com/148529091>.

101 Kai Stinchcombe, ‘Ten Years In, Nobody Has Come up with a Use for Blockchain’, *Hackernoon*, 22 December 2017, <https://hackernoon.com/ten-years-in-nobody-has-come-up-with-a-use-case-for-blockchain-ee98c180100>.

102 Mohit Kaushal and Sheel Tyle, ‘The Blockchain: What It Is and Why It Matters’, *Brookings*, 29 July 2016, <https://www.brookings.edu/blog/techtank/2015/01/13/the-blockchain-what-it-is-and-why-it-matters/>.



weather Blockchain lives up to its bite, the numerous ‘blockchain imaginaries’ proposed by such advocates have been disseminated through academic, cultural and artistic research. Furthermore, the speculation caused by blockchain investment and media discourse has offered fertile terrain for artistic interpretation, where the implications of blockchain technology as a system for social governance ignites various ‘blockchain imaginaries’ that are articulated and disseminated through cultural and artistic organizations.

Many articulations of these visions are captured in the book *Artists Re:Thinking the Blockchain*¹⁰³ that features a collection of essays, artworks and fictional texts that respond to blockchains and their potential integration and application as a technology of social governance. The work of cultural practitioners (artists, hackers, theorists and designers) respond to the proposition of blockchain governance through a variety of methods that address concerns, critiques and general alternative visions of society in response to blockchain technology as an emerging system for social governance. In tandem with the publication of *Artists Re:Thinking the Blockchain* one of the editors and curator of Furtherfield, Ruth Catlow initiated a series of workshops in collaboration with Ben Vickers (of Serpentine Gallery) that focused on exploring blockchain from the position of the arts. ‘Decentralized Autonomous Organization With Others’ (or DAOWO) is a series of bi-monthly events that uses experimental performative methods such as Live Action Role Play (LARP), scenario-based improvisation and workshop simulations to collectively play out various speculative futures inspired by various propositions made by blockchain-based governance technologies.

Each workshop took a different subject around blockchain and participating in them often felt uncannily similar to the aforementioned blockchainer hackathons, where groups would subvert such practices by collaboratively producing their own imaginary ‘real-world’ blockchain application with which they could critique, satire and play out in some of the emergent narratives of blockchain governance. This type of game play produced a type of simulation of frequently mentioned ‘real-world’ blockchain applications, where speculations surrounding blockchain technology initiated performative scenarios for individuals to imagine and improvise potential social and political conditions caused by widespread blockchain integration. Nearly all the workshops used a form of LARP, a type of generative theater, frequently associated with board game culture or war re-enactment (e.g. the popular game World of Warcraft) that has matured in recent years due to the growing community in Scandinavian countries who have developed role play methods into ‘Nordic Larp’. Nordic Larp explicitly focuses on more open, collaborative and immersive creation of role play and games, the community nurturing and developing LARP within an applied socially engaged praxis, through regular festivals and collaborating with local governments in Scandinavia as a form of applied social therapy.¹⁰⁴ While LARP offers lots of possibility for immersion and performative encounters it seems and unlikely medium to facilitate responses to the emergence of blockchains. But while the immanence of blockchains remain a figment of imagination rather than an working realization, LARP’ing various scenarios and imagined futures inspired or propelled by the prospect of blockchain governance offers a very semantic and physical framework to understand,

103 Ruth Catlow, Marc Garrett, Nathan Jones and Sam Skinner (eds), *Artists Re:Thinking the Blockchain*, Liverpool and London: Torque and Furtherfield, 2017.

104 Elvia Wilk, ‘More than a Game’, *Frieze*, 15 October 2017, <https://frieze.com/article/more-game-0/>.

negotiate and challenge the potential impact of blockchain-based governance. Another relevant use of performative practice in blockchain improvisation is the use of speculative design methods in Human Computer Interaction (HCI) design. In 'Speculative Approaches to understanding DAOs'¹⁰⁵ Chris Elsdén and John Vines describe some of the performative methods used to collectively explore the implication of blockchain technology and DLTs. *Speculative Enactments* is the term used to describe the act of performing the conditions and consequences caused by potential configurations of emerging techno-social constructions. Fictional scenarios, gameplay and improvised character interaction are all used to challenge and speculate on potential techno-social futures. During a workshop held by Design Informatics department from Edinburgh University a group of participants (including myself) produced a fictional prototype for blockchain-based wedding contracts. A prototype of a mobile application was created and tested before making a video enacting the consequences or potential use cases of a smart contract that binded together individuals digital cryptocurrency wallets to a shared wallet when individual's were located in the same geographic area. The application was named *Handfastr*,¹⁰⁶ after the practice of handfasting - a pagan ritual of enacting temporary wedding like commitments between individuals, commenting on the rise of bitcoin marriages and applications of decentralized technology that operate outside of church or state authority. Through deploying a prototype and enacting the consequences of a potential use case of an emerging technology individuals can gain experiential understanding of the social affect of techno-social systems and based on this experience, offer potential alternatives to dominant claims made over the future use of such technologies.



Fig. 3. DAOWO Workshop #5 What Will It Be Like When We Buy An Island (on the blockchain). Photo by Rory Gibson, taken on Thursday 29 March 2018.

105 Chris Elsdén, John Vines, 'Speculative Approaches to Understanding DAOs', In: *Proc. DIS 2017 Workshop on New Value Transactions – Understanding and Designing for Distributed Autonomous Organisations*, <https://chriselsden.files.wordpress.com/2018/01/dao-workshop-cam-ready.pdf>.

106 See: <https://vimeo.com/163565402>



These examples are by no means exhaustive, but demonstrate how performance methods are being used in both cultural and academic sectors to disseminate blockchains and their implications as a technology for social governance. As part of presenting some of these emergent strategies it is beneficial to consider the reasoning for this unconventional and unlikely occurrence and evaluate its effectiveness. It is clear that the publicity surrounding blockchain has captured the minds and imagination of cultural practitioners and in response to this artists have begun investigating the technology. When imagining the implications of blockchain applications such as DAOs or smart contracts it is very difficult to gauge how these new configurations for social structures and organizations would play out in 'real world' contexts. This is why LARP, gameplay and improvisation offer mediums with which individuals can 'rehearse relations' that could form around new blockchain based models of social organization. Because blockchain development is undergoing 'a social turn' it is of vital importance for the impacts of these technologies to be tested through what we can describe as critical 'dry runs'. It should be noted that the practice of simulation is also an embedded feature in the architecture of blockchain based systems, the blockchain platform Ethereum, for example, has a 'test-net' for developers to ensure their code is deployed correctly and functions properly before launching it onto the core Ethereum blockchain. LARP equally offers a similar simulation test-bed for emulating the social relations potentially caused by the widespread integration of blockchains as technologies of social governance.



Fig. 4. DAOWO Workshop #5 What Will It Be Like When We Buy An Island (on the blockchain). Photo by Rory Gibson, taken on Thursday 29 March 2018.

This reminds me an awful lot of an episode from Black Mirror (participant in 'What will it be like when we buy an island (on the blockchain)?'¹⁰⁷)

¹⁰⁷ See: <http://www.daowo.org/#what-will-it-be-like-when-we-buy-an-island-on-the-blockchain>.

Within such methods, the use of improvisation to enact alternative blockchain imaginaries is another unconventional strategy that works to varying degrees of effect. For example, a popular improvisation method used in theater to generate interactions and scenarios is called ‘yes and’ – a simple rule for players to support the co-creation of generative fiction where each statement must be responded with ‘yes, and’ to further elaborate claims made by other actors. While this method is traditionally used to accelerate the flow of improvisational dialogue and make the performance more entertaining for the viewer, within blockchain LARP’s conversations quickly escalate from the from the mundane to the hyper-dystopian.

When being used as a method to counteract the often bold claims made about blockchain technology in the media it can lead to the LARP generating absurd emulations of popular science fiction dystopias. This is where the artist John Cage, who had his own discomforts about the use of improvisation in music resonates with the use of improvisation in in techno-social role play, Cage argued that improvisation ‘does not lead you into a new experience, but into something with which you’re already familiar’ (Darter 1982:21). While Cage was referring to the use of improvisation in music creation and not for exploring speculative social realities inspired by blockchain governance, I would argue based on my experience of improvisation and blockchain role play, that a similar outcome is often reached. That is not to disregard improvisation methods within this space, but that certain methods are more effective than others when attempting to disseminate speculative fiction surrounding blockchain technology.

In the first MoneyLab Reader, theorist Max Haiven argues that ‘money is a medium of the imagination’ and that cultural strategies can provide productive methods to rebuild alternative imaginations of finance, money and social relations.¹⁰⁸ In general, the adoption of performance methods within cultural communities to demystify and re-enact the implications of blockchains in society posits a fascinating attempt to de-construct, imagine and re-enact alternatives. Blockchain, originally designed to support the digital currency bitcoin, is fundamentally a financial technology that has captured the collective imagination of how money, value and society can be re-designed through networked technology.

The impact of blockchain still lies in the success of the speculative imaginaries used to generate interest and venture capital and transition into a widespread ‘general purpose technology’. In other words, blockchain will only become a technology for social governance if individuals become convinced in its claims made by its advocates. These claims, while seemingly rooted in factual or scientific properties of blockchain architecture remain widely embellished propositions of the cultural imaginary. Therefore, while future applications of blockchains and DAOs reside in the white papers of start-ups and the imagination of technofuturists, the use of role play, improvisation and simulation are powerful and engaging tools with which to react, investigate and explore speculative imaginaries through collective action. Rehearsing relations and improvising potential futures has emerged as counter-strategy from the arts to contest possible future imaginaries proposed by blockchain advocates and will go a long way in staging the realities of many ‘real-world’ applications created by the many varied blockchain imaginaries.

108 Max Haiven, ‘Money as a Medium of the Imagination: Art and the Currencies of Cooperation’, In: Geert Lovink, Nathaniel Tkacz and Patricia de Vries (eds), *MoneyLab Reader: An Intervention in Digital Economy*, Institute of Network Cultures: Amsterdam, 2015.



References

- 'Blockchains for Social Good', *European Commission*, https://ec.europa.eu/research/eic/index.cfm?pg=prizes_blockchains.
- Catlow, Ruth, Marc Garrett, Nathan Jones and Sam Skinner (eds). *Artists Re:Thinking the Blockchain*, Liverpool and London: Torque and Furtherfield, 2017.
- Darter, Tom. 1982. 'John Cage' *Keyboard* 8(9):18-29.
- Dutchchain, 'Blockchaingers Hackathon 2018 After Movie (Biggest Blockchain Hackathon in the World)', *YouTube*, 10 April 2018, <https://www.youtube.com/watch?v=4h87L6IRu0s&feature=youtu.be>.
- Elsden, Chris, John Vines. 'Speculative Approaches to Understanding DAOs', In: *Proc. DIS 2017 Workshop on New Value Transactions – Understanding and Designing for Distributed Autonomous Organisations*, <https://chriselsden.files.wordpress.com/2018/01/dao-workshop-cam-ready.pdf>.
- Dovey, Max. 'Love on the Block', in Ruth Catlow, Marc Garrett, Nathan Jones and Sam Skinner (eds), *Artists Re:Thinking the Blockchain*, Liverpool and London: Torque and Furtherfield, 2017.
- Golumbia, David. 'MoneyLab#2: David Golumbia. Blockchain: Revolution or Business as Usual?', *Vimeo*, 3 December 2016, <https://vimeo.com/148529091>.
- Haiven, Max. 'Money as a Medium of the Imagination: Art and the Currencies of Cooperation', In: Geert Lovink, Nathaniel Tkacz and Patricia de Vries (eds), *MoneyLab Reader: An Intervention in Digital Economy*, Institute of Network Cultures: Amsterdam, 2015.
- Johnstone, Keith *Impro: Improvisation and the Theatre* London, Bloomsbury, 1979.
- Kaushal, Mohit, and Sheel Tyle. 'The Blockchain: What It Is and Why It Matters', *Brookings*, 29 July 2016, <https://www.brookings.edu/blog/techtank/2015/01/13/the-blockchain-what-it-is-and-why-it-matters/>.
- McKay, Tonie. 'How Blockchain Technology Can Transform Voting in Scotland', *Business for Scotland*, 12 October 2017, <http://www.businessforscotland.com/blockchain-technology-can-transform-voting-scotland/>.
- Stinchcombe, Kai. 'Ten Years In, Nobody Has Come up with a Use for Blockchain', *Hackernoon*, 22 December 2017, <https://hackernoon.com/ten-years-in-nobody-has-come-up-with-a-use-case-for-blockchain-ee98c180100>.
- Symons, Kate. 'One-Day Conference on 22 May', *Oxchain*, 4 May 2018, <http://oxchain.uk/2018/05/04/one-day-conference-on-22-may/>.
- Wilk, Elvia. 'More than a Game', *Frieze*, 15 October 2017, <https://frieze.com/article/more-game-0/>.

COMPLEMENTARY CURRENCIES

KEY SYSTEMS FOR BETTER AND FAIRER ECONOMIC COOPERATION

Leila Ueberschlag

Over 5,000 community currencies exist across the globe. Far from being fully developed, they face many challenges and could offer more possibilities. In Switzerland, the District Currency brings a new element missing from all traditional currency models: the consideration of the commons as an integral part of a currency design.

Money. Everyone uses it and strongly depends on it. It is the means by which we trade among ourselves; it is our main cultural store of and standard of value. In a globalized world, where the importance of building (new) sustainable ways of living – particularly in the context of cities – is getting bigger everyday, money is often the missing piece of the equation. Driven by the current monetary and banking system, it remains one of the most – if not the most – centralized and controlled resource we have.

Nevertheless, in communities worldwide people have come up with alternatives to the usual way of paying for goods and services. Instead of using legal tender or fiat currencies such as Euros, Swiss Francs, US Dollars, Pounds or Yen, they are using privately developed substitutes.¹⁰⁹ Called complementary, regional or community currencies, these alternative systems complement a national currency with the intent to stimulate the local economy.¹¹⁰ They support ‘the movement towards local and sustainable economies, and [strengthen] the communities they operate in’.¹¹¹

Complementary currencies: examples of bottom-up intervention that strengthen socio-economic development

Their potentials are wide. In most cases, they emerged as responses in times of economic collapse, when national currencies can no longer meet the needs of the population and when people lose faith in the established monetary system.

When well designed, a complementary currency can provide several advantages. It can unleash blocked economic potential, lessen the included indirect costs, strengthen local exchanges – and as a consequence reduce transport, traffic and energy consumption – stabilize and support local SMEs and, therefore, reinforce local employment.¹¹²

By increasing local economies’ resilience to economic volatility, empowering economically-

109 Amy Fontinelle, ‘An Introduction to Complementary Currencies’, *Investopedia*, <https://www.investopedia.com/articles/economics/11/introduction-complementary-currencies.asp>.

110 Paolo Dini and Alexandros Kioupiolis, ‘Community Currencies as Laboratories of Institutional Learning: Emergence of Governance through the Mediation of Social Value’, *Inaugural WINIR Conference*, London, 11 - 14 September 2014, <http://eprints.lse.ac.uk/59307/>.

111 Hannah Greinetz, ‘How Local Currencies Are Driving Stronger Local Economies’, *Meeting of the Minds Blog*, 15 January 2015, <http://meetingoftheminds.org/local-currencies-driving-stronger-local-economies-12279>.

112 Panayotis Antoniadis, Jens Martignoni and Leandro Navarro, ‘Economic Sustainability of CNs (v1) Introducing Community Currencies’, *Network Infrastructure as Commons Project*, Deliverable number: D2.4 (2017), https://www.netcommons.eu/sites/default/files/d.2.4-v1.0_submitted.pdf.



marginalized populations with an inclusive form of exchange and reinforcing economic democracy by giving communities the opportunity to design their own currencies, complementary currencies provide a good example of bottom-up intervention that strengthen socio-economic development through greater trust and transparency.¹¹³

Renaissance in terms of media exposure and consumer popularity

From the SOL-Violette¹¹⁴ in France to the Brixton Pound in the UK¹¹⁵, the Léman in Switzerland¹¹⁶, the Calgary Dollar¹¹⁷ in Canada and the Sarafu-Credit in Kenya, it's now estimated that over 5,000 community currencies have been established across the globe. If this field of research has received little attention until today, complementary currencies are currently enjoying a renaissance in terms of media exposure and consumer popularity. Cryptocurrencies such as Bitcoin and Ether – by advocating for anonymity, absolute individualism and independence, replacement of direct human trust by algorithms and computing power – are in many ways in complete opposition to most complementary currencies, which are designed '[...] to foster human relations, direct trust, cooperation, democracy and the common good'.¹¹⁸ However, the debate that surrounded crypto currencies and blockchain technologies in recent years has played an important role in promoting alternative ways of exchanges and creating new narratives around money and value, while questioning the established system (with its limits and downfalls in terms of trust, security and efficiency). It is important to note that more participatory and open ways, such as the complementary currency toolkit Freecoin,¹¹⁹ have since then been created.

Despite their potential, few complementary currencies last over time

Although complementary currencies have recently been put in the spotlight, they actually predate most of the state-backed currencies in circulation today. As mentioned above, they have a tendency to appear and disappear in tandem with the state of correlating national economies:

*The Great Crash of 1929 pushed hundreds of municipalities on both sides of the Atlantic into issuing their own alternative currencies to salvage local finances, from the WIR system in Switzerland to corporate scrips in the US north-east. Elsewhere, the Spanish Civil War and subsequent socioeconomic instability led to the creation of nearly 400 different types of community currency across Spain, while Greece's colossal economic crash in 2009 inspired the cashless Local Alternative Units system.*¹²⁰

Despite their promising potential, very few complementary currencies last long-term. They are usually organized as legal entities such as associations or cooperatives. Many currencies run on centralized ICT infrastructures and platforms such as Cyclos¹²¹ or CES¹²². Sometimes,

113 Fontinelle, 'An Introduction to Complementary Currencies'.

114 See: <https://www.sol-violette.fr>.

115 See: <http://brixtonpound.org>.

116 See: <http://monnaie-leman.org>.

117 See: <http://calgarydollars.ca>.

118 Antoniadis, Martignoni and Navarro, 'Economic Sustainability of CNs (v1) Introducing Community Currencies'.

119 See: <https://freecoin.dyne.org>.

120 **Nash Riggins**, 'Local currencies save communities from economic turmoil', *Europeanceo*, 10 August 2017, <https://www.europeanceo.com/finance/local-currencies-save-communities-from-economic-turmoil/>.

121 See: <https://www.cyclos.org>.

122 See: <https://www.community-exchange.org/home/about-us/>.

paper notes are used (alone or in combination with e-money). The costs associated to the maintenance of this infrastructure can be high; they are, in most cases, covered through voluntary work, membership fees or, in the case of professional currencies, by transaction costs or taxing system. 'The currency survives as long as its operational costs are covered, it is well operated by the management and is regularly and along its principles used by the members of the community.'¹²³ Many challenges (in terms of trust, scalability, costs, legal issues, etc.) need to be overcome in order for these systems to keep running over the years and most complementary currencies fail to scale to more than a few hundred active members. Complementary currencies therefore rarely manage to engage a wider part of the local economic actors. More specifically, complementary currencies have '[...] to compete with global institutions with tremendous power, require a level of social cohesion and local collaboration that is more and more difficult to assume, and offer solutions that are complex to implement and prone to failures.'¹²⁴

With 45.000 business members, the Swiss WIR is one example of a success story Nonetheless examples of success stories such as the Swiss WIR¹²⁵ (the oldest complementary currency still ongoing with around 45.000 business-members representing around 8% of the all Swiss SME's) or the Sardex in Italy¹²⁶ can be found. They provide evidence that such currencies can play a long-term complementary role to the global economy. While most complementary currencies are born in times of economic crisis, their benefits extend beyond the satisfaction of direct needs. 'They raise awareness about the nature of money and they contribute to the engagement and emancipation of communities. Hence, in many cases, [they] have evolved to something more than "emergency" solutions.'¹²⁷

From social and environmental motivations to solutions centered on SMBs, community currencies vary wildly

Loyalty schemes, reputation points, volunteering credits and money transfer systems are all popular among contemporary markets.¹²⁸ The WIR in Switzerland and the Sardex in Italy are solutions centered on small and medium size businesses, while the RES (initially launched in Belgium and now expanding to Catalonia, Spain)¹²⁹ is expanding to customers. Some systems focus on supporting regional economy and sustainability such as the English transition currencies the Totnes Pound¹³⁰, the Brixton Pound and the Bristol Pound¹³¹ as well as the Chiemgauer in Germany¹³² (the main effects of such a currency are identified through changes of the behavior of the users. They might prefer local businesses and avoid saving the currency,

123 Antoniadis, Martignoni and Navarro, 'Economic Sustainability of CNs (v1) Introducing Community Currencies'.

124 Antoniadis, Martignoni and Navarro, 'Economic Sustainability of CNs (v1) Introducing Community Currencies'.

125 See: https://www.wir.ch/fr/?gclid=EAlaIqobChMlxpvjjeqW2wVW4myCh27hwoTEAAYASAAEgLaRPD_BwE.

126 See: <https://www.sardex.net>.

127 Panayotis Antoniadis, Merkouris Karaliopoulos and Jens Martignoni, 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks', *Network Infrastructure as Commons Project*, deliverable number D1.6, Version 2, (2018), <https://www.netcommons.eu/sites/default/files/d.2.6-v2.3.pdf>.

128 Riggins, 'Local Currencies Save Communities from Economic Turmoil'.

129 See: <https://www.res.be>.

130 See: <https://www.totnespound.org>.

131 See: <https://bristolpound.org>.

132 See: <http://www.chiemgauer.info>.



resulting in a higher local liquidity and purchasing power.)¹³³

The Spice Time Credits in England¹³⁴, as well as many hundreds of time-banks and LET-Systems (Local Exchange Trading system) worldwide¹³⁵ bring examples of currencies with social and environmental motivations. The LET-System – today widespread over the world – was created in Canada in the 80s and is based on mutual credit between individuals using a centralized database ledger to maintain the system. The South African web service Community Exchange System (CES) provides, for instance, a platform and tools for communities to set up and manage exchange and trade in their areas without using official money. The concept of time banking was developed in the 80s as well. In this model, the unit of currency – as its name suggests – is time and the focus is on social activation and network creation.

Another class of complementary currencies, called incentive-currencies, is based on the idea that, through rewards, people are willing to take action into certain direction. Voluntary work for social and cultural activities often lags behind its potential because of a lack of resources by the people. A possible solution is to pay voluntary efforts with non-commercial money: a community currency to bridge the gap and to focus the efforts. In the UK, the Spice Time Credits is an example of such a currency. The ideas behind it are rooted in the need to revive communities in ex-mining areas in South Wales. The Spice organization has developed programs that include the voluntary, public and private sector to create a national network of local Time Spice branches.

The District Currency: integrating the commons in the community currency's design

From the many different attempts and approaches it can be seen that community currencies are far from being fully developed and could offer many more possibilities. The potential of currencies as key systems for better and fairer economic cooperation therefore can be exploited through improved monetary concepts.

*Most of the community currencies developed over the past 50 years are based on the individual exchange of the free market concept, and are optimized to facilitate the exchanges of goods and services in a network of individuals or companies considered as individual actors. The existing mutual credit systems, LETS or the time-banks concept [...], preferably support this market-centered or peer-to-peer view, and most currencies limit joint community activities as far as the operation of the currency system is concerned.*¹³⁶

In such a context, The District Currency (a model of a new type of community currency especially designed for housing cooperatives or cooperatives in general) was created. The model which was initially designated by the name Quartierwährung (quartercurrency, citydistrictcurrency in German) was developed by Flexibles Economic Research & Development,¹³⁷ Zurich, in partnership with the University of Applied Sciences of Northwestern Switzerland (FHNW). It [...] brings a new element missing from all traditional currency models, the consideration of the commons as an integral part of a currency design.¹³⁸ The motivation, in terms of community engagement, behind the development of such a currency, [...] is the fact that many communities are built around the values of commoning and mutual-help,

133 Antoniadis, Martignoni and Navarro, 'Economic Sustainability of CNs (v1) Introducing Community Currencies'.

134 See: <http://www.justaddspice.org/about-us>.

135 Antoniadis, Martignoni and Navarro, 'Economic Sustainability of CNs (v1) Introducing Community Currencies'.

136 Antoniadis, Karaliopoulos and Martignoni, 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks'.

137 See: <http://www.flexibles.ch>.

138 Antoniadis, Karaliopoulos and Martignoni, 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks'.

which are often neglected in practice because of today's economic circumstances like busy schedules, privatization, and more.¹³⁹ The aim is to encourage participation and exchange through the use of a complementary currency. An additional potential of such system is the reduction of neighborly anonymity. At the core of its design, the District Currency puts a set of 'common work', whose accomplishment is democratically decided by a group. The model aims to help cooperatives to boost their internal economy and help surrounding districts to develop economically. It might also be useful for neighborhood groups and networks of various types.

Functions of the model

*The money creation of the new currency is done centrally by the cooperative in the form of fees or recognitions for community services. The currency can then be used for other purposes and capitalize talents and skills of its members. After specified periods, a part of the currency in the form of taxes or a part of the rent is returned to the cooperative. Thus, a constant and controllable circulation of currency arise, which also has the potential to replace a (limited) portion of the revenues in local currency, such as Euro or Swiss Francs.*¹⁴⁰

Implementation and further developments

Initially, the District Currency was specifically developed for a new building project of the cooperative *Mehr als wohnen*¹⁴¹ in Hunzikerareal, Zurich, Switzerland. With this first large-scale settlement, the cooperative realized an exemplary flagship project with particularly resource-conserving, sustainable and community-promoting characteristics. The first model of the currency, first called *Quartierwährung* in German and later translated into *District Currency* in English, was developed between 2012 and 2014. Implementation of the currency is still under consideration, however, the initial concept has since the opening of the settlement been refined and further developed using simulation methods and gaming.

The importance of planning games in economic education

While the topic of money and currency can be complex to explain, planning games have proven to be successful methods to help understand difficult concepts and learn about complex systems. 'The idea of using educational games for the development of new community currencies and for the adoption or introduction of such currencies into a community was born out of the inherent difficulty to evaluate new currency designs from their description on paper.'¹⁴² To demonstrate the possible implementation of a district currency, the simulation District-Currency-Game was developed in 2014 as another Flexonomix game¹⁴³ and has since been tested different times.

139 Antoniadis, Karaliopoulos and Martignoni, 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks'.

140 COMPARE Network. Interdisciplinary explorations of self-organization in Zurich, Switzerland, COMPARE project report, April 2015, http://compare-network.net/documents/compare_report_zurich_apr2015.pdf.

141 See: <https://www.mehralswohnen.ch>.

142 Antoniadis, Karaliopoulos and Martignoni, 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks'.

143 See: <http://flexonomix.org/en/about-us/>.



The Flexonomix District-Currency-Games

The Flexonomix District-Currency-Game introduces a district currency for housing cooperatives. It is used as a role model to demonstrate the power of democracy and the commons through an interest-free monetary system. The aim is to provide an easy applicable and effective tool to all interested housing cooperatives and neighborhoods to serve communities trying to include the management of the commons as an integral part of their local currency. Such currency models are intended to serve the community which attempt to solve economic, ecological and social problems on the basis of communal democracy. Today, the District-Currency-Game is being implemented by the Zurich-based non-profit organization NetHood¹⁴⁴ – with the netCommons project¹⁴⁵. The District Currency itself is being discussed in new Zurich housing cooperatives. NetHood was founded in 2015 with the aim to bridge research and action around the design and use of tools that allow people in localities to get in contact, self-organize, and cooperate. Such tools include DIY wireless networks, community currencies, cooperative housing models, hybrid social infrastructures, and community-supported infrastructure. The organization engaged in ongoing work on community networks and educational games for understanding community currencies as tools for commoning projects such as the cooperative housing projects NeNa1¹⁴⁶, *Mehr als wohnen* in Zurich and/or community networks such as Guifi.net in Barcelona.¹⁴⁷ In the context of the netCommons project, the initial model of the District Currency was refined and generalized in order to make it applicable to the environment of community networks. An extended part of the resulting work is currently under publication at the International Journal of Community Currencies¹⁴⁸. The next objective is to prepare a pilot project and evaluate at least one year of operation to further refine the model and explore in more depth the ‘human interface’ – such as the behavioral aspects of the currency – based on empirical evidence.¹⁴⁹

144 See: <http://nethood.org>.

145 See: <https://netcommons.eu>.

146 See: <https://www.nena1.ch>.

147 See: <https://guifi.net>.

148 See: <http://ijccr.net>.

149 Martignoni, Antoniadis and Karaliopoulos, ‘Economic Sustainability of CNs (v2) Community Currencies for Community Networks’.

References

- Antoniadis, Panayotis, Merkouris Karaliopoulos and Jens Martignoni. 'Economic Sustainability of CNs (v2) Community Currencies for Community Networks', *Network Infrastructure as Commons Project*, deliverable number D2.6, Version 2 (2018), <https://www.netcommons.eu/sites/default/files/d.2.6-v2.3.pdf>.
- Antoniadis, Panayotis, Jens Martignoni and Leandro Navarro. 'Economic Sustainability of CNs (v1) Introducing Community Currencies', *Network Infrastructure as Commons Project*, Deliverable number: D2.4, (2017), https://www.netcommons.eu/sites/default/files/d.2.4-v1.0_submitted.pdf.
- COMPARE Network. Interdisciplinary explorations of self-organization in Zurich, Switzerland, COMPARE project report, April 2015, http://compare-network.net/documents/compare_report_zurich_apr2015.pdf.
- Dini, Paolo and Alexandros Kioupkiolis. 'Community Currencies as Laboratories of Institutional Learning: Emergence of Governance through the mMediation of Social Value', *Inaugural WINIR Conference*, London, 11-14 September 2014, <http://eprints.lse.ac.uk/59307/>.
- Fontinelle, Amy. 'An Introduction to Complementary Currencies', *Investopedia*, <https://www.investopedia.com/articles/economics/11/introduction-complementary-currencies.asp>.
- Greinetz, Hannah. 'How Local Currencies Are Driving Stronger Local Economies', *Meeting of the Minds Blog*, 15 January 2015, <http://meetingoftheminds.org/local-currencies-driving-stronger-local-economies-12279>.
- Riggins, Nash. 'Local Currencies Save Communities from Economic Turmoil', *Europeanceo*, 10 August 2017, <https://www.europeanceo.com/finance/local-currencies-save-communities-from-economic-turmoil/>.



IMAGINE THERE'S NO MONEY

A MIND EXPERIMENT

A dialogue between Stefan Heidenreich and Geert Lovink

Geert Lovink: German media theorist Stefan Heidenreich has produced a concise proposal for a 'non-monetary economy'. The book is entitled *Money* and came out late 2017 with Merve Verlag in Berlin. Excerpts in English can be found at the Transmediale website.¹⁵⁰ There we find the following description of Heidenreich's project: 'Given complex information infrastructures that have already been developed for documenting transactions, tying consumer habits to identities, and accurately predicting future exchanges, the substructure of a new kind of economy is now in place.'

I got to know Stefan ages ago when he studied under Friedrich Kittler and was part of the roaring 90s intellectual scene in Berlin. In 2008, I was surprised to see that Stefan had— together with his brother Ralph—produced an essay on money. Not every cultural critic writes freely about monetary policies. There's a rich German humanities tradition in this respect, starting with Karl Marx and Georg Simmel and carrying through to the 1968 Freudo-economics of Horst Kurnitzky, or alternatively via Christina von Braun to Joseph Vogl. At the same time, there is a speculative faction of political economists, called 'value Marxists', who are brilliant in pushing the boundaries of abstraction. While I am fascinated by the way they ask the right questions, I was never sure about their answers. Value Marxists come up with frighteningly precise formula, yet fail completely to connect this to a political analysis. This school includes Robert Kurz, but also the former Oekonux circle. For me, the early Jean Baudrillard and Andre Gorz also belong to this group of thinkers. Characteristic of their approach is an open, speculative relation towards money and value, a perspective that is based neither on the descriptive method of sociology nor on the ethnography of Marcel Mauss or Bronislaw Malinowski—or on the quasi-objective laws of classical economics, for that matter.

Whereas the Heidenreich brothers' previous two co-written books were a mix of political economy and humanities in the genre of Keynes-reads-Foucault, Stefan's latest book is straight-forward manifesto in which he combines a Kittler-style self-confidence about the role of technology with the possibility that we might be able to imagine another world in which money is replaced by matching, value is replaced by relationships and work is replaced by doing. This is the type of concrete utopia the 21st century badly needs. This is speculation in a true sense: theory that opens possibility-spaces.

Stefan is undogmatic in his approach and takes the objections and hesitations of the reader seriously. What makes his style so convincing is the certainty that we all share about irreversible developments in highly-developed Western societies. Digitization of money is a done deal, the cashless society is already practically in use, and automatization is a fact,

¹⁵⁰ <https://transmediale.de/content/for-a-non-money-economy/>.

with or without visible robots. This is also the case with the flexible valuations of good and services that we already experience on booking sites for hotels and airplane tickets: change a parameter, come back ten minutes later, and the price is suddenly dramatically different. Unlike most Marxists, Stefan Heidenreich does not believe in a ‘real’ value that is stored somewhere in the essence of goods and services. There is no reality behind a price; all is pure fluctuation. That’s where Heidenreich’s deep post-modernism shows through. All the references to the real have already gone up in smoke. What’s left is arbitrary. What used to be value has been simulated and matched with alien outside forces that few have a grip on. And we have to get used to this new condition. The same could be said about Universal Basic Income. In many countries, elements of UBI are already in place. A considerable number of people see that UBI would be a more efficient system that would unleash a lot more creativity and new ideas in comparison to the stress and burn-out characterising today’s neo-liberal culture of competition. The recently-published second MoneyLab reader¹⁵¹ identifies two opposite positions: Patrice Riemens vs. Dmytri Kleiner. We could also contrast Brett Scott’s concerns in the same MoneyLab reader about the cashless society with Heidenreich’s grand proposal.

Time to open the debate.

Stefan, you need to explain something. The hardest part of your argument is your proposal to abolish money as such. People will associate that with the actually-existing socialism of the past and its misery, although those communists in fact never got rid of money. On the other hand, it’s not so hard to see that we’re well under way.

Stefan Heidenreich: One has to keep in mind that the ultimate task of any economy is distribution. How do we share and distribute things and how do we allocate activities? Seen from that angle, it becomes almost self-evident that money and markets deliver one possible solution, but not the only one. David Graeber’s book *Debt: The First 5000 Years*¹⁵² helped me a lot to think beyond money. Given the fact that there existed a non-money—and non-barter!—economy, why should the regime of money last forever? When one looks at economic history from a media theory perspective, the point of transition to a non-money solution becomes completely obvious. As soon as we have a system in place that is able to track and compute all transactions, it is time to think again about non-money modes of distribution. That’s where we are now.

GL: You state that matching overcomes the classic mechanisms of the market. Can you explain this? According to orthodox libertarian geeks, blockchain and cryptocurrency software create a ‘pure’ market that is automated, anonymous and, in that sense, honest. The fact that there are main players manipulating that system often remains unnoticed (let alone that hacking is now becoming an economic force, stealing \$100 million USD on a weekly basis). No money, no market? Or the perfect market? More market than market?

SH: The market is a place where information, supply and demand, is aggregated into a price. Karl Polanyi has shown that this supposedly ‘free’ market is an illusion that relies heavily

151 Inte Gloerich, Geert Lovink, and Patricia de Vries (eds), *MoneyLab Reader 2: Overcoming the Hype*, Amsterdam: Institute of Network Cultures, 2018, <http://networkcultures.org/blog/publication/moneylab-reader-2-overcoming-the-hype/>.

152 David Graeber, *Debt: The First 5000 Years*, New York, NY: Melville House Publishing, 2011.



on regulation. But the dishonesty of the system lies not in the market, but in money itself. Unfortunately, money allows not only for payments and valuation, but also for accumulation. That's why all economies of money inevitably turn into tributary regimes. And that's why markets and money need to be replaced by matching. With a caveat: it will be possible (and some people will try their best) to tweak matching algorithms towards inequality, but it doesn't come as 'naturally' as with money. We have to be ahead and start to think of what politics of matching we want.

The bigger question looming in the background is: Do we still need a general equivalent? And my rather philosophical claim is: No, we don't! In saying that, I am not referring to a purely fictional post-modern fluctuation with no attachment to a so-called 'reality'. On the contrary: there is value; and, it is generated within networks. For a start, think of Google's PageRank Algorithm. It uses the structure of links to assign value to information. I know, it no longer works that simply, but let's start with the basics.

The value I have in mind is an assignment that is being calculated at the instance of a transaction. It refers to a range-continuum of network-value that stretches from instantaneous, individual desires on one end to the far-reaching infinite projections of a sustainable world at large. This is no fiction, but way closer to real behavior than market prices.

There is also a philosophical parallel to be added. It was Alfred Sohn-Rethel who linked philosophical models of abstract representation to the invention of money as general equivalent. Seen from that perspective, replacing money with matching connects to a philosophical model that looks to what we actually do instead of focusing on representations. I still have to dig deeper into the philosophy of Robert Brandom and his concept of inferentialism, but my impression is that one can speak of an 'inferential economy' that comes after money.

GL: Unlike most researchers, artists and activists, you seem positive about algorithmic governance. You state that we simply have to politicize this field. Can you elaborate on this? Right now, even scholars who claim to study this phenomenon do not understand what's going on for the simple fact that there is no direct access to these algorithms. We're tapping in the dark. Frank Pasquale calls this the 'black box society'. How can we overcome this lack of knowledge and transparency?

SH: There's no choice. Coming from a Kittlerian standpoint, I take the media a-priori as a given—almost as a second nature, following the laws of physics—and not the needs of humans or a society. It would take a world-governing bureaucratic power to stop the inherent dynamics of technology. Society is not in charge of technologies, but rather is itself an effect of media and platforms. For that matter, I also do not believe in the power of critique. It tends to concede the driver's seat to the powers in charge. The possibility to shape our future and our modes of living grows not through retrospective miserabilism, but with progressive utopian proposals. Luddism is no option. 'Wo aber Gefahr ist, wächst / Das Rettende auch'; 'But where danger is, grows / The saving power also'.¹⁵³ A short-cut translation of this might be: 'No risk, no fun.' That is why we need to come up with projective political proposals before we find ourselves in an algorithmic quagmire that is fully owned by the old capitalist forces.

153 Friedrich Hölderlin, 'Pathmos', in: Leo Freiherr von Seckendorf, *Musenalmanach für das Jahr 1808*, Regensburg, in der Montag- und Weissischen Buchhandlung, 1808.

This approach casts some doubt on the role of critique. Is warning against technologies, or pointing out dangers and all that doesn't work, enough? My impression is: it means we are always a step too late. How do you see the role of critique?

GL: Here at the Institute of Network Cultures in Amsterdam we're always accused of being too early. We started our MoneyLab project on internet revenue models, such as mobile money, crowdfunding and the blockchain in 2013. Your first book on money came out in 2008. The problem these days is not that we are coming too late. We have lost contact with mainstream media. Here in the Netherlands, all communications have to be positive and simplistic. Criticism is not uplifting and 'Gezellig'. We're spoiling the party (which is correct). For years, no one was interested in our social media critique. Nowadays, our critique of Bitcoin is compared with arrogant remarks of big banks and New York Times commentators. At the same time, we've lost the ability to unleash cultural trends and social movements. Our content is radical and up to date but our organizational understanding is not. However, there is also a good side to this dire situation. If we're able to change our formats and tone, we can achieve a lot. Criticism is not a culture of complaint. I promote it as a literary genre, an ability to reflect on one's work, genre, and professional practice. Criticism runs against the dominant forces of marketing and PR. A review asks questions and puts a work, discourse, or event into a larger context and lifts the entire culture to a higher, more complex level. Lively, rich and diverse cultures are driven forward by review cultures that push the boundaries. Critique doesn't put things down but radicalizes situations and opens new windows. The idea of the critic as a bad-tempered and depressed failed professional has always existed, but should not concern us. What's at stake now is freedom of expression. Both New Age positivists and authoritarian bureaucrats love to shut down critique because it essentially disturbs their business. Participatory culture and citizen involvement can only join the table if they come up with constructive proposals for 'change'. Negative feedback is banned. We clearly see that in the crackdown on 'comment cultures' on social media platforms. As long as educated citizens contribute to an Habermasian rational discourse, all is fine. But let's return to the Money Question. The European Left doesn't seem to play much of a role in this debate. How come? At what point in time did they start to lose touch? Is the Left still attached to industrial capitalism and the working class? When it comes to global finance and the virtual nature of money, there seems to be a real refusal to critically analyse such phenomena. There's Yanis Varoufakis and the DiEM25 agenda, which focused on the non-democratic nature of the European Commission in Brussels and the ECB in Frankfurt. However, what you're addressing goes well beyond the level of the Euro as a common currency. On the other hand, there was Andre Gorz... Who are your positive examples? How can we expand speculative economics?

SH: The Left has won the culture wars. But it has paid a heavy price. It won by succumbing to the neo-liberal ideology. Blair, Schroeder, Clinton, also unfortunately Obama, when it comes to drone-wars and finance, and so on. Having won the cultural side of this two-sided war, the left turned normative – 'CTRL-Left'. Whomever brought it up, that term gives something of an accurate assessment. With the Left turning normative, the dynamics of transgression are being pushed to the Right. In the end, we're about to lose both: the economic grounding of a genuine Left and the transgressive dynamics needed for a collective movement. The left also suffers from another normative drawback, and that is Marxism. There is one



big difference between Marx then and today's Marxists: Marx was very much aware of the economic discourse of his time. Unfortunately, large parts of the Left are stuck with economic theories dating back to the 19th century, which also come with very old-fashioned morals. As in: the good, honest worker's eternal struggle against the bad, greedy capitalist. I'm not saying it's all wrong. It just creates a dumb, enclosed, and unnecessarily rigid intellectual climate with lots of dogmas not open for discussion: the labor theory of value, class struggle, surplus value, a completely outdated theory of money. Again: I'm not saying it's all wrong, but hey, let's try to do what Marx did: read and openly discuss what contemporary economic theory from a diverse spectrum has to say about those ideas.

Politically, there is lots of ways to go—as Varoufakis, Sanders, or Corbyn show. Unfortunately, Varoufakis does not really make his ideas stick with normal people. Too far away from daily needs. That distance combines unfavorably with a highbrow-elitist intellectual image that he sometimes likes to give himself. I know, in real life he's different, but from far away one doesn't notice. Just compare Corbyn or Sanders. Varoufakis may be good as economic advisor, but hardly as an integrating figure that moves people.

Speaking more generally, we need to find ways to preserve the achievements of the cultural fights—when it comes to gender, race and all the issues covered in the debates on intersectionality—and at the same time to liberate the left from the spectre of neo-liberalist and militaristic politics. To achieve that, we need to think further ahead and develop utopian models for a remote future. It's not enough to know what we don't want. We also need to think about what we want.

GL: We seem to want blockchains, or at least so it seems if you read the *Zeitgeist*: we want multi-purpose distributed ledgers that secure anonymity, transparency and undermine old hierarchies. This is at least the promise. Hipsters in their 20s and 30s are open to these ideas and do not seem to mind the underlying right-wing values. In terms of money, the utopian crypto-currency movement has two antagonistic aims. One way of looking at it is to see the blockchain as a transfer of assets from the older to the younger generation, with the assumption that 'the crypto market is a device for transferring money from the impatient to the patient'. In this way, the new generation experiments with new forms of money that are no longer controlled by banks and national banks. On the other hand, as you suggest, this same set of technologies promotes values that go beyond money as such. This leads to confusing trends that happen at the same time: we have a financialization of everything, and a movement to go beyond money as such.

SH: I was just in Italy, which has a political system that, according to a recent *Jacobin* article,¹⁵⁴ is decades ahead. They had their version of Trump more than 20 years ago, conventional parties started to collapse in the 90s, and now they have 5Stelle winning most of the votes of all parties. In the small town in Southern Italy where I often spend time they won more the 50%. I had long discussions in my favorite coffee bar trying to understand why. Is platform populism the political future? Is there something to be learned here? And what can we do about it?

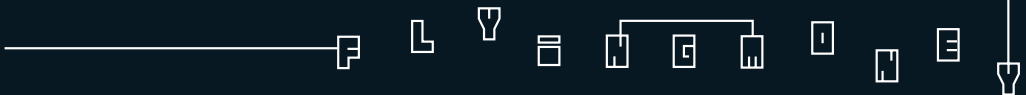
154 David Broder, 'Italy is the Future', *Jacobin*, 4 March 2018, <https://www.jacobinmag.com/2018/03/italian-election-far-right-m5s-lega/>.

GL: Certain countries and electoral systems will not allow new parties to emerge (USA, UK, Australia), while in other Western countries it is relatively easy to establish a new party and get votes, even if you're outside of the system and relatively unknown. The electoral system and the mainstream media in Germany are pretty rigid. In Italy and the Netherlands, on the other hand, people are open for new faces and ideas and try out new parties, often just for the sake of it—not even because they are in agreement with the political program of Geert Wilders (or the Five Star Movement, for that matter). There is a cynical reason behind this. It's a veto against the neo-liberal consensus model of the global elites: Make Europe Evil Again. We're tired of the permanent re-education that teachers, media and even friends are imposing on us. The progressive pedagogical approach no longer works and arguably results in even more support for right-wing populism (what this has got to do with platforms, I don't know). Instead of responding in a politically correct fashion, we should go on the offensive: let's approach our adversaries head-on and expose the manipulative schemes of extraction and expulsion not only with reasonable investigative journalism, but also with memes, trolling tactics, and slogans. Bitcoin is an anarcho-capitalist tool that is neither distributed nor anonymous and that is manipulated by a small group of insiders. It's got nothing to do with a 'market', nor are any of the players interested in the development of practical cases in which these crypto-currencies are actually used. Let's try to impose such counter-rhetoric like this also to other fields. I like the idea of 'fake Left' and 'fake Right'. It is clear that social-democrats are on the way out because of their shameless defense of austerity and neo-liberal policies. Why should income cuts, unemployment and rising living costs for health care etc. be good for us all? They are fake-left. Why should they be rewarded for the mess we're in right now?

SH: My suspicion is that the progressive approach formerly known as 'leftist' no longer works because its pedagogical self-esteem has turned into normative paternalism. Whoever is 'deplorable' enough to reject its just cause is now being called out as populist. Here, a post-modernist perspective could indeed help. One would need to re-think Baudrillard's logic of fake distinctions in the light of network laws. To cut the argument very short: the fake distinction between left and right ceased to be applicable once opinion clusters replaced the general public and its common ground. The common battlefield that has supported a binary distinction of political parties (as fake as it's described by Baudrillard in his book *The Divine Left: A Chronicle of the Years 1977-1984*¹⁵⁵) has been turned into a clustered network of opinion leaders surrounded by hordes of trolls patrolling rhetoric boundaries. What it has to do with platforms? Everything. They define the discursive field. Marshall McLuhan returns as fake news; as in, news whose purpose it is to spread, regardless of its relation to what actually happened. The medium, as in: the network platform, decides what becomes message. The related loss of control of the public opinion is met with hysterical outbursts that no less rely on fake claims.

This all means that we may no longer be able to fix democracy by education alone, along the Adorno model. It is very clear that democracy needs to be defended. I'm afraid we cannot defend it in the form that democracy has right now. Democracy is a 19th century ritual executed within the communication media constraints of its time, with manually counted

155 Jean Baudrillard, *The Divine Left: A Chronicle of the Years 1977-1984*, Los Angeles: Semiotext(e), 2014.



choices on paper collected every four years. We may have to rethink and reinvent viable democratic procedures under network conditions.

GL: True. Many of our generation have shied away from the challenge. Instead we have put all our cards on the indirect forms of influence—such as change in mentality, spirit, education, or other politics towards the body—with the aim to undermine power as such. New forms of decision making have been developed but they are often avoiding the formal level of decision making, such as consensus-building during the assembly. Our experience with the ‘network conditions’, as you call it, has only been indirect. We grew up with opinion polls and now live under the regime of Cambridge Analytica, in which target audiences can be influenced on the level of the individual user. At the same time, we are used to ‘striking back’ in the form of dissenting behaviours and opinions. What we know best is the creation of ‘participatory cultures’, to use the ugly term of Henry Jenkins. However, Silicon Valley carefully prevents us from turning desperate disappeared voices into decision making machines.

In Germany, the cultural elite is still afraid of the ‘vox populi’. Denazification is, more than 70 years later, still an unfinished project. In the Netherlands, where bluntness is considered part of the proud national character, citizens have recently lost the right to cast a referendum. In short, we’re going backwards. As you say, there’s no progress. Dutch hackers have been campaigning against unsafe internet voting software for at least two decades. What’s left are tiny pockets of virtual communities that experiment with internal voting apps, such as Loomio. We’re still afraid of the ‘fluctuations of our opinion’, to use a phrase of Jean Baudrillard. His analysis has proven to be wrong: we’re not fascinated by our own ‘fluctuations’. We’re afraid of our own opinions concerning the Other, and this is precisely the exploit trolls so effectively explore. So, instead of the automation of democracy, I would argue for the creation of offensive network cultures that can make hegemonic claims. This is why the development of alternative social media architectures is so urgent. Inside those social systems, we can experiment with decentralized digital decision-making and go from there. A top-down approach right now would be disastrous.

References

Baudrillard, Jean. *The Divine Left: A Chronicle of the Years 1977-1984*, Los Angeles: Semiotext(e), 2014.

Broder, David. 'Italy is the Future', *Jacobin*, 4 March 2018, <https://www.jacobinmag.com/2018/03/italian-election-far-right-m5s-legal/>.

Gloerich, Inte, Geert Lovink, and Patricia de Vries (eds). *MoneyLab Reader 2: Overcoming the Hype*, Amsterdam: Institute of Network Cultures, 2018, <http://networkcultures.org/blog/publication/moneylab-reader-2-overcoming-the-hype/>.

Graeber, David. *Debt: The First 5000 Years*, New York, NY: Melville House Publishing, 2011.

Hölderlin, Friedrich. 'Pathmos', in: Leo Freiherr von Seckendorf, *Musen Almanach für das Jahr 1808*, Regensburg, in der Montag- und Weissischen Buchhandlung, 1808.





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Being a hub and a hotspot for many people from all over the world, also other new dynamics have entered Amsterdam and other cities in the last few years. Moneyflows pass through the city of which we do not know anymore whose money it is, where it comes from or where it goes. Also, the developing cryptocurrencies and parallel money cultures all contribute to the opaqueness of the future of the financial world.

To better understand the current dynamics that will affect our financial future, Amsterdam has taken the initiative to organize an international conference in collaboration with the Institute of Network Cultures from the Amsterdam University of Applied Science: Flying Money – Investigating illicit financial flows in the city.

This publication contains the results of the conference, along with relevant academic and other articles ensuing from the conference.