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The Lake District Pound, a Holistic Impact Assessment?

Using Integral Research Methods to Study a Currency Innovation

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Abstract

Sustainability, social and economic issues are at the forefront of the local, national and international agenda, as well as (crypto-)currency headway is making the headline. How to assess the impact of a currency innovation? This study explores the experience of the Lake District Pound (LD£), a local currency launched in May 2018 and based in the Lake District National Park, a UNESCO World Heritage Site in Northwest England. In August 2018, 4 months after its launch, already LD£ 76,663 were issued in the network among 252 local independent businesses, by using 20 bureaux de change. We used the research approach of integral theory to examine this complementary currency scheme managed by a social enterprise, and to assess their holistic impacts. By supporting local independent businesses for free and by giving its entire profit to two foundations (environmental conservation and community support), the currency project seeks to integrate sustainability into its business model and influence stakeholders by raising their awareness on local economy and community support. After presenting the historical and regional context, we will introduce four different methods – according to integral research – and analyze their respective and combined results to provide a holistic and overall impact assessment of the scheme.

Keywords

Lake District Pound, national park, world heritage, impact assessment, integral research.

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Introduction: How to assess the impact of a currency innovation?

In the field of currency innovation, there is a research gap in term of its impact assessment and improvement of complementary currencies. Indeed, only 12.4% of articles in the peer-reviewed journal of this field – the International Journal of Community Currency Research – and three systematic literature review studies are dealing with this topic (Place, 2018; Place and Bindewald, 2015). There is a gap in the impact research of currency innovation, and we wish to address it and propose an integrative framework for its impact assessment and improvement.

A systematic literature review of 1,175 studies of complementary currencies from 1993 to 2013 (Michel and Hudon, 2015) has demonstrated a positive impact with high social sustainability, limited economic benefits, and few environmental outcomes. Neutral objectives, mainly economic and social with few environmental goals, have been analysed with reference to a study of 3,418 currency-related projects from 1996 to 2011 (Seyfang and Longhurst, 2013). Negative impacts due to limited tax integration, as well as business model and policy agenda change, have been shown through 126 studies of complementary currencies between 1996 and 2013 (Dittmer, 2013).

To investigate a phenomenon, to assess its impact (significant influence and effect), to measure its success (achieving assumed goals), the chosen perspectives and lens would influence both methods and results, both data collection and analysis. Consequently, “How to assess the impact of a currency innovation?” is a necessary preliminary question to “What is the impact of a currency innovation?”

To explore a holistic approach to currency impact assessment, we will study the specific case of the Lake District Pound and its associated research questions: What are the initial conditions which influence the implementation of a local currency in a National Park and World Heritage site? How to measure the impact of a local currency initiative in rural context impacted by substantial tourist influx? Does this currency innovation have the potential to become a social and sustainability innovation and to support the local economy and community?

To answer these questions, we will first present the historical and regional context of this complementary currency in order to have a background of the subject. We will then address the four methods used – according to integral theory – and their respective results in order to assess the impact of this complementary currency, in a holistic manner. Finally, through a combined analysis of these several research techniques, we will discuss our methodological contributions and perspectives – considering the possibility of a digital currency.

This paper is written in the first-person plural (we), except for the experiential quote(s) of the lead author, namely Christophe Place, written in the first-person singular (I).

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1. Historical background and regional context: A local currency in a National Park and World Heritage site in the era of cashless society.

Focusing on the Lake District National Park in the county of Cumbria in United Kingdom, this paper explores a unique case study supported by the Eco-innovation Cumbria Project: the Lake District Pound (LD£), a complementary currency that supports local independent businesses and community projects. This project of sustainable development in action neatly fits into the critical agenda of the 2015-2020 management plan and actions of the Lake District National Park Partnership (Lake District National Park Partnership, 2019). This partnership, launched in 2006, agreed on a vision linked with the 2030 Agenda of the Sustainable Development Goals (SDGs). Launched in 2015, the SDGs reflect differing perspectives and bring together global issues in a way which is translatable by offering the potential to realise greater and wider sustainability in diverse contexts (United Nations General Assembly, 2014; Dodds, Donoghue, and Roesch, 2016). These critical agendas have been implemented to try to thwart the Great Acceleration of the impact of human activity on Earth's geology and ecosystems, called the Anthropocene epoch which started with the Industrial Revolution.

With 19.17 million tourists visiting the Lake District in 2017 – spending £1,417 million and providing 18,565 full time jobs in tourism – it is the most visited and richest National Park in United Kingdom (Lake District National Park Authority, 2017; National Parks, 2014). Cumbria has the first and only park in the United Kingdom which is both a National Park and a UNESCO World Heritage Site – since July 2017 thanks to its unique natural landscape and historical culture – but relies heavily on tourism with the sector adding a revenue of £2.72 billion to Cumbria in 2016 – representing 25.31% of its Gross Domestic Product (Cumbria Tourism, 2017). This creates tension between economic development (e.g. agriculture, tourism) and nature conservation (e.g. reforestation, rewilding). Economic tension accentuated by the fact that Cumbria is one of the poorest county in England – with 10'000 eastern European migrant workers living in the boundaries with marginal poverty (Cumbria Tourism, 2017). Further challenges to promoting sustainability are rooted in conservation of heritage and culture which may be opposed to some of the changes and impacts associated with agriculture and tourism (Waterton, 2005). Thus, Cumbria is a unique place that brings together individuals and organisations engaged in and committed to local efforts to find a balance between environmental, social and economic sustainability.

Concerning the rise of a cashless society and the fall of cash system, cash was still representing 40% of the payment, with 10% rise of banknotes in circulation for both storage and payment between 2015 and 2016, even if cashless grew by 11% from 2015 to 2016 (British Retail Consortium, 2015; Tetlow, 2017). Already 58% of the population were using contactless in 2018 in North-west of England, it is predicted that cash could fall to just 10% of all payment within the next 15 years (UK Finance, 2019; Access to Cash

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Review, 2018). Not to mention the mass arrival of RFID (i.e. radio frequency identification) cashless payment wristbands for events and festivals.

The Founder and Chief Executive Officer (CEO) of the LD£, Ken Royall, became concerned with the need to change the current financial system following the financial crisis of 2007-08. Ken wanted to involve himself in the practice of economics, and sought to learn by doing instead of just talking and criticizing. This is how he started his journey in 2015 by launching an in-depth study of complementary currencies. In 2016, he quit his job to develop a local currency in the Lake District where he lives. Ken subsequently introduced the LD£ in 2018 with 198 local independent businesses and 17 bureaux de change, also called swap counters (Lake District Pound, 2018).

Formally launched on 1 May 2018, the LD£ received start-up investment from the Lake District National Park Authority and 22 local impact investors. The LD£ is managed by a Social and Solidarity Economy (SSE) organisation, called social enterprise: The Lakes Currency Project Ltd. is a company limited by shares, with a board of directors which comprises 5 members. The LD£ has two full-time employees, the CEO and Business Relationship Manager, who are supported by two volunteers and various external consultants.

SSE organisations use their profit to improve sustainability management, replicate models and sometimes provide charitable causes with philanthropic support. Some of the challenges that SSE organisations experience include clarity of purpose, governance and accountability to stakeholders, driven by the organisations agenda and sphere of influence (Moulaert and Ailenei, 2005). By harnessing organisational core values and using the SDGs as a framework, SSE organisations have the potential to make greater progress towards sustainability.

The historical and regional context of this complementary currency is at the heart of the tension between, on the one hand, economic growth (the LD£ is surfing on the wave of tourism opportunity), but on the other hand, socio-environmental conservation (the LD£ is supporting the conservation of both culture and landscape in a National Park and World Heritage site). We will continue our research journey to discover how the Lake District Pound is trying to reconcile the two.

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2. Methods, results and impact: An integral research method, a holistic impact assessment.

Money is a discursive institution constituted as a system of rules, values and norms (Bindewald, 2018, p. 66). Discourse is at the foundation of institutionalism and refers to the rules, norms and conventions providing the structures and influencing our behaviours (Bindewald 2018, p. 74). As Money is both a subjective value which objectively influence our behaviour – and vice versa – a holistic and integral research approach in the phenomena is relevant. Intrinsically, the integrative investigation of currency and money is a research study full of complexity and interdisciplinarity by nature, but it has mostly been explored through a positivist and empirical lens throughout the ages (Arnsperger, 2009).

Integral theory of Ken Wilber looks at reality through the lens of four quadrants, depending on both an individual or collective point of view, and an interior or exterior point of view. This framework is thus called: All Quadrants All Levels (AQAL) (Marshall, 2012). Based on cross-cultural and post-disciplinary or meta-disciplinary scholarship and application, integral theory model is by essence considered as a multidisciplinary, interdisciplinary and transdisciplinary approach (Esbjörn-Hargens, 2006, p. 91). According to Christian Arnsperger, co-author of *Money and Sustainability* with Bernard Lietaer in 2012, this framework is suitable for the study of economic and monetary systems, also called integral economics or integral money (Arnsperger, 2010, p.18; Lietaer et al., 2012):

“The use of AQAL is our best chance to be able to use a whole spectrum of methodological tools that will gradually push our economies on an evolutionary-developmental path toward higher existential and critical performance.”

Integral research, based on integral theory, use its own methodological research approach to validate knowledge, referred as Integral Methodological Pluralism, through the inclusion of irreducible methodologies for accessing reproducible knowledge – or verifiable repeatable experience. There are eight methodological families inherent to a truly integral – and post-postmodernist or post-metaphysical approach – to understand and investigate a phenomenon. Indeed, each quadrant perspective or dimension is linked to a methodological family, from an inside or outside viewpoint. And each methodological family is related to a mode of investigation, practices or techniques, and a validity claim or consideration (Esbjörn-Hargens, 2006, p. 90; Martin, 2008).

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“What I experience”

“I” Subjective realities;

e.g. self and consciousness, states of mind, psychological development, mental models/constructs, emotions, state of self, etc.

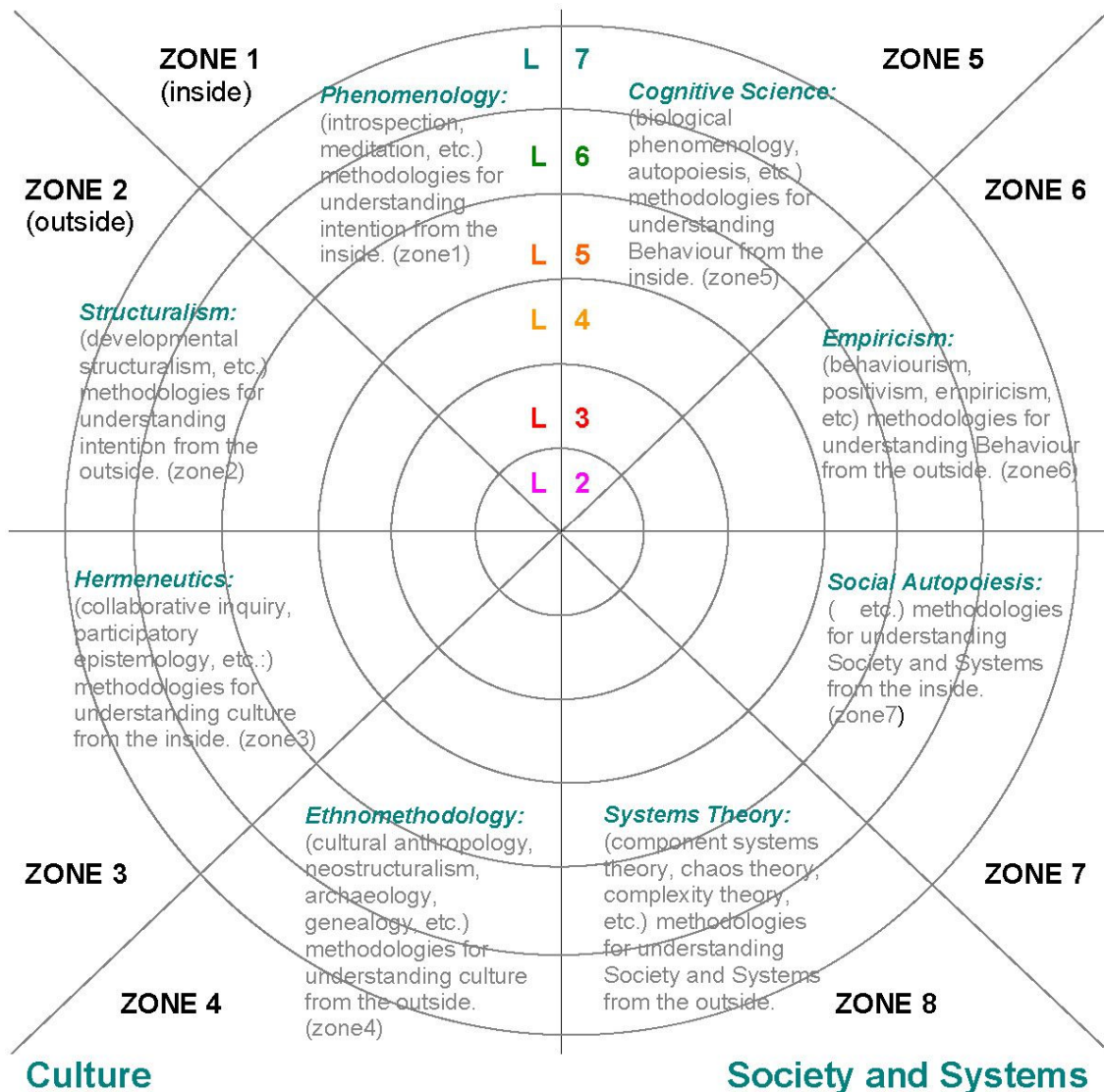
“What I do”

“It” Objective realities;

e.g. brain and organism, visible biological features, degree of activation of the various bodily systems, etc.

Intention/Consciousness

Behaviour



Culture

Society and Systems

“We” Intersubjective realities;

e.g. shared values, world views, webs of culture, communication, relationships, cultural norms and customs, etc.

“Its” Interobjective realities;

e.g. social systems, environmental systems, visible societal structures. economic systems, political systems, etc.

“What we experience”

“What we do”

Figure 1 Integral Methodological Pluralism research approach

Source: Shaik (2018)

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Respecting the Integral Methodological Pluralism approach, we will combine four research techniques, corresponding to four out of eight methodological families, using at least one per quadrant.

Table 1 Research techniques used according to Integral Methodological Pluralism

Research methods	Research techniques	Data generation
1. Phenomenology (inside) Experiences “I”	Autoethnography	Live experience
2. Structuralism (outside) Experiences “I”	N/A	N/A
3. Hermeneutics (inside) Cultures “WE”	Participatory action research	Stakeholder mapping
4. Ethnomethodology (outside) Cultures “WE”	N/A	N/A
5. Autopoiesis (inside) Behaviours “IT”	N/A	N/A
6. Empiricism (outside) Behaviours “IT”	Case study Questionnaire survey	Business model
7. Social autopoiesis (inside) Systems “ITS”	N/A	N/A
8. Systems theory (outside) Systems “ITS”	Econometrics	Local spending

Source: Place (2019)

2.1 Phenomenology: Autoethnography: A live experience analysis.

Autoethnography is a research approach – method or technique at the crossroad of ethnography and autobiography – of self-reflection, anecdotal experience and autobiographical story used to explore and connect to wider cultural and political meanings and understandings (Ellis et al., 2010). This paper’s lead author had twice the opportunity to experiment the use of the LD£ and here are his notes about these live experiences:

“From 20 to 26 June 2018, I swapped £40 for LD£40, and bought for £3 a Lake District Pound passport containing a LD£1 note (£2 for the passport with a swap of £2 for LD£2). I spent all of my LD£41, in some affiliated local independent businesses, by collecting 8 stamps out of 30 on my passport – extended to 35 in 2019.

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During this first experience – with a close relation who came to visit me and the Lake District during this radiant summer 2018 – I was totally involved in the currency scheme. Excited by the discovery of this cultural heritage and natural landscape, I could not stop looking for another affiliated shop to spend my LD£. Each time, I naturally started a conversation with the shopkeeper or craftsperson around the purpose of this currency before sharing some personal insights about our respective life and origins. Discovering new shops and collecting various stamps on my passport encourage me in using the LD£ this first time.

On 19 November 2018, I swapped £100 for LD£105 – benefiting from the +5% special offer. I gave LD£40 to a close relation and spent LD£65 in some affiliated local independent businesses. One of them even offered me a -5% discount of my bill because I was paying with LD£.

During this second experience, I not only wanted to treat myself during a special day of celebration but also gave the opportunity to someone else to experiment the LD£. Instead of looking for affiliated shop, I went to my favourite shops in town and asked them if they accepted the LD£. If not, I spoke about its advantages like a salesperson. If yes, I spent some LD£ and ask them some quick feedbacks. Having a +5% swap offer, and a -5% shop discount, encouraged me in using the LD£ this second time.

Each time, I felt that I was having a more unique, authentic and intimate relation with the shopkeeper or craftsperson by using the LD£ instead of conventional money – i.e. pound sterling (GBP or £). However, it is important to note that during both experiences, I was in an exceptionally good mood due to a special moment: a holiday and a celebration.

Finally, during the summer 2018, by participating in several promotional events and fulfilling various survey, I had the opportunity to swap some GBP for LD£. Offering a swap service directly in the street – interacting with users through an informal transaction – gave me a viewpoint on the other side of the scheme. I had pleasure to propose this service and to engage the conversation with passer-by, having a quick chat about the whys and wherefores of Money – like a belief impacting our behaviours and vice versa.

The fluorescent branding and the meaningful design of the LD£ helped me to relate to the Lake District National Park as a World Heritage site in a deeper manner. Indeed, each note denomination and yearly version were linked with a specific iconic leading figure – and its associated natural landscape – representing the cultural heritage of the region.” Christophe Place.

Analysing this experiential quote, we can claim that the protagonist had a refreshing and singular experience with the traders – and even the users – by using the LD£. His personal experience was fully in line with the value proposition of the LD£: having a fun and unique experience in the Lake District.

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2.2 Hermeneutics: Participatory action research: A stakeholder mapping analysis.

Participatory action research is a research approach – method or technique at the crossroad of community participation and action – which seeks to collaboratively understand and change the world through a collective process of self-investigation (Chevalier and Buckles, 2013). From May 2018 – for at least 6 months – by immersing in this practical currency project and by involving in this applied research project, several stakeholders have been identified and the scheme has been actively promoted through multiple encounters and events.

As the LD£ is a new project, most of the related work is currently supported by the staff and volunteers of this emerging SSE organisation. Some initial stakeholder mapping has been undertaken, by identifying their respective high (+) or low (-) influence power (IP) and their high (+) or low (-) interest or legitimacy (IL) in relation to the currency project (Lake District Pound 2018).

Table 2 Lake District Pound stakeholder map

<p>2. Powerful actors (IP+/IL-: vigilant attention)</p> <p>Bank of England (central bank)</p> <p>Financial Conduct Authority (financial regulator)</p> <p>Lake District National Park Authority (national park regulator)</p> <p>Cumbria Tourism (tourist board)</p> <p>National Trust (conservation organisation)</p> <p>Cumbria County Council (county council)</p>	<p>1. Key actors (IP+/IL+: major preoccupation)</p> <p>Team (project management)</p> <p>Investors (project financing)</p> <p>Outlets (currency exchange counters)</p> <p>Traders (distributors and shops)</p> <p>Users (visitors and residents)</p> <p>Cumbria Community Foundation (social charity)</p> <p>Lake District Foundation (environmental charity)</p>
<p>4. Uninfluential actors (IP-/IL-: avoid damage power)</p> <p>Independent Money Alliance (local currencies network)</p> <p>Transition Network (grassroot community projects)</p> <p>New Economics Foundation (think-tank)</p>	<p>3. Legitimate actors (IP-/IL+: avoid gathering power)</p> <p>University of Cumbria (research and education)</p> <p>Cumbria Newspapers Group (competition prize)</p> <p>Business Improvement Districts (gift and loyalty card)</p>

Source: Lafferty and Place (2019)

In United Kingdom, the Bank of England and the Financial Conduct Authority classify projects of this nature as voucher schemes and not currencies, meaning that it has to be a limited network in a specific geographical area, with a clear expiry date, and no change back and thus no redeem (swap back) for users

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(Naqvi and Southgate, 2013). This current regulation narrows the capacity of currency creation – voucher schemes being backed by conventional money – and thus the deep purpose of currency innovation as an experimental laboratory for its continuous improvement.

In 2018, the Independent Money Alliance – a network of independent local currency schemes created in 2014 in United Kingdom – counted 9 projects in Bristol, Brixton, Exeter, HullCoin, Kingston, Totnes, East London, Liverpool, and Lake District. Outside of this network, there were also 5 other projects in Lewes, Stroud, Cardiff, Oxford and Glasgow (Independent Money Alliance, 2019).

There were 6 Business Improvement Districts (BIDs) in 2018 in Cumbria – Kendal, Penrith, Penrith Industrial Estate, Ulverston, Barrow-in-Furness – among 300 in United Kingdom and Ireland. This business-led partnership agreement is the main central government tool created to develop town and city centers – commercial areas, industrial estates, business parks (The Bid Directory, 2019). Almost each BIDs created its own gift card or loyalty reward scheme. For example, the Kendal BID launched in 2014 The Kendal Gift Card and the Swippi Kendal's Loyalty Card in over 100 businesses in Kendal. Even Cumbria Tourism launched its discount card for £20 a year: My Cumbria Card. Not to mention the Lakelovers Gold Reward Club, launched in 2000, which regroups 100 luxury and exclusive holiday properties. Nowadays, almost every trader is now involved in one of these schemes, except for the small ones for which the cost is too high.

Based on this legal environment and market competition – and to engage all stakeholders using an inclusive approach – the LD£ adopted an entirely free and simple mechanism based on a swap at parity with pound sterling and a yearly version of a paper voucher currency accepted by local independent businesses and purchased by visitors or collectors. Noting that a high proportion of both Bristol and Brixton Pound has not been redeemed by the expiry date for the transition toward the new issuing version, the LD£ also expect to redeem only a part of the vouchers sold, using the difference to cover costs – as a unique revenue model.

Being a social enterprise also implies a board of investors and directors which focus on the cost-effectiveness and the financial viability of the currency project. Thus, the main opportunity to increase its revenue is to focus on potential new visitors by targeting tourist operators from China, Japan, South Korea, India, United States of America, and United Kingdom. This business-oriented approach targeting visitors might not include all the stakeholders and their respective concerns, especially the residents, the minimum wage-earners and the farmers. Nevertheless, by bringing various stakeholders around a central question about of the necessary support of the local economy and community, the LD£ co-created a common value between them. However, it remains to assess how the LD£ advocacy raised their profile around this topic.

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2.3 Empiricism: Case study and questionnaire survey: A business model analysis.

Case study is a research approach – method or technique at the crossroad of quantitative and qualitative study – which involves a detailed examination of a subject of study, with information-oriented sampling, and its contextual conditions (Yin, 2013). From August to October 2018, several surveys focusing on the business model of the LD£ have been conducted.

Spending LD£ to support the local economy (as the network is mainly made of local independent businesses) and collecting LD£ to support the local community (as the entire profit of the scheme goes to two foundations) are the double value proposition of the LD£. Even if its revenue model is only based on the second value proposition (collecting LD£), usually called leakage or breakage: the notes never being redeemed because they were not spent, lost, or taken for souvenirs (e.g. kept to make a collection of the currency denomination) are considered as a revenue in GBP when the new version of the denomination is launched each year (and thus the old version cannot be redeemed anymore).

According to an August 2018 survey of 100 people (from the Lake District or visiting it), 35% had heard of the LD£, but only 9% of respondents actually used it. Another recent survey of 50 people (from the Lake District or visiting it) found that 52% would use the LD£ because it supports local businesses, and 22% would do so because profits from the scheme go to two Lake District charities for environmental conservation (Lake District Foundation) and community support (Cumbria Community Foundation). In addition, 38% indicated that they would like a purchase discount by using it and 26% said they would like a reward by collecting some stamps from the participating shops on their LD£ passport. However, only 2.3% of the shops agreed in October 2018 to propose a special LD£ discount (Lake District Pound, 2018). Even before launching the LD£, an initial survey conclude that the shops were not willing to pay £10 per month for the use of the LD£ passport, instead of a free membership without its use. In response to the research undertaken to date, the resulting data has helped the organisation to revise its strategy as part of a continuous improvement process.

For the LD£, support for environmental conservation and community development has not been an adequate value proposition to make it a financially viable SSE organisation. The LD£'s philanthropic goal to encourage support for community projects has not achieved anticipated success. The initial focus was on the altruism of well-educated visitors who were expected to support the sustainability of the local community and economy via a complementary currency. The research results, outlined above, prompted a shift in the marketing strategy towards a voucher scheme that offers a more interactive shopping experience to visitors. Since May 2019, the scheme is now a reward competition and a prize draw based on collecting stamps in a LD£ passport from participating businesses. During the launch of the new 2019 version – from May to June 2019 – there was a +11% swap online offer by swapping £90 for LD£100 to encourage its use,

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but only 2 people used it.

By driving people through social media to the online shop – with more details on each traders and an interactive map for their location to make the transaction more convenient than swapping in a bureau de change and looking for the LD£ sign on the front window – they double the numbers of website visitors from 2018 to 2019. Nevertheless, the overall sales of summer 2019 were behind the ones of summer 2018 – which has probably benefited from the novelty factor.

To increase the credibility in the network and thus the trust in the currency in 2019, The Lakes Currency Project decided to integrate – in the network of affiliated businesses – some major partners willing to accept the LD£ as a platform to support local businesses and communities – in accordance with their corporate values of being local. The public transport bus service in the Lake District – Stagecoach bus with about 700 drivers. A chain of high-end supermarkets in Northern England – Booths with their retail chain in Windermere, Kendal, Penrith, Ulverston, and Keswick. The National Trust for Places of Historic Interest or Natural Beauty, an independent charity for environmental and heritage conservation, is also part of their aspirations. Unable to prove and guarantee an increasing footfall for traders so far, the question of a membership was not raised.

In 2018, the LD£ value proposition focused on altruism incentive, by inviting users to support the local economy and community. But in 2019, they tried a new strategy focusing on a fun and unique visitor experience with commercial incentive by offering not only special swap offer, but also prize draw and rewards by collecting stamps. Nevertheless, the numerous steps to be able to either swap LD£ or collect the stamps in the LD£ passport – to finally participate in a prize draw and receive some rewards – appears as an important entry barrier for users. Not to mention that some users would trust more an electronic voucher scheme than a paper one, and that some traders would not be aware of the LD£ acceptance, embarrassing users during the transaction – despite being encouraged to give the money back in LD£ rather than GBP to increase the flow of currency.

2.4 Systems theory: Econometrics: A local spending analysis.

Econometrics is a research approach – method and technique at the crossroad of statistics and economics – which aims to give empirical content to economic relationships through a quantitative analysis of economic phenomena (Hashem Pesaran, 1987). From June to November 2018, a ledger to track the currency flow and stock of LD£ have been implemented.

For its launch in May 2018, 198 local independent businesses, 8 Post Offices and 9 Tourist Information Centers as bureau de change, or swap counters. In August 2018, only 4 months following its launch, a total of LD£76,663 was issued in circulation among a network of 252 local independent businesses in the Lake

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District National Park with sufficient business sector diversity (41.3% store and gift, 33.3% food and drink, 13.9% outdoor and indoor activity, 7.1% accommodation, 4.4% health and wellness), and with 9 Post Offices and 11 Tourist Information Centres used as swap counters. Despite Brexit uncertainty and other factors adversely affecting tourist numbers, the LD£ launch was a success regarding the amount of units issued in circulation (among users and shops) in comparison with other reference case studies in Europe as summarised hereinbelow:

Table 3 Local currency reference case studies comparison

Symbol, name (location)	Duration (launch date, data collection)	Units issued in circulation	Network of businesses
LD£, Lake District Pound (Cumbria, England)	4 months (May 2018, August 2018)	76,663	252
F, Farinet (Valais, Switzerland)	1 year (May 2017, May 2018)	150,000	186
£B, Bristol Pound (Bristol, England)	3 years (September 2012, June 2015)	700,000	800
e, Eusko (French Basque Country, France)	5 years (January 2013, December 2017)	750,000	700
Chiemgauer (Priem am Chiemgau, Germany)	14 years (January 2003, December 2017)	822,000	561

Source: Lafferty and Place (2019)

In May 2019, by closing the books for the annual accounts of The Lakes Currency Project – without any profit – the ledger of the complementary currency was approximated to LD£150,000 issued, LD£100,000 spent (by users and redeemed by local businesses), and LD£50,000 kept (by users and not redeemed). The total unit of currency spent is equal to difference between issued and kept according to the assumption that the same unit of currency can only be spent once – based on the hypothesis that the traders would not reuse the LD£ received from a user with a supplier but only redeem it to pound sterling when necessary.

For its first year of operation, from May 2018 to May 2019, the velocity approximation of the LD£ was equal to 66.66% – which is equal to the currency spent divided by the currency issued (and is expected to be above 1 for the characterisation of money), which is equal to the difference between the currency issued and the currency kept divided by the currency issued.

The nominal Gross Domestic Growth at current price of the United Kingdom in 2018 was \$2,828,644 million – or £2,273,820 million – for a global money supply – or monetary aggregate M3 – of £2,907,045

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in 2018 (International Monetary Fund, 2018; Federal Reserve Bank of St. Louis, 2019). For 2018, from January 2018 to December 2018, the velocity of the GBP was equal to 78.21% – which is equal to nominal Gross Domestic Growth at current price divided by the global money supply or monetary aggregate M3.

However, taking into account that two-thirds of the LD£ have been spent and one-third have been kept, we can assert that the LD£ has fulfilled its double value proposition: spending LD£ to support the local economy and collecting LD£ to support the local community. The entire idea of this local currency is to promote localism through local consumption, local businesses and local community.

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3. Contributions, discussions and perspectives: The fall of a paper currency! The rise of a digital currency?

According to the autoethnography, the LD£ has been perceived as a fun and unique experience by a passionate researcher – the lead author – who showed willing. Through the participatory action research, The Lakes Currency Project discerned that the proliferation of voucher schemes – asking for a membership to users or traders – was competing with the LD£ in the same area. Nevertheless, as a differentiating criterion, the LD£ decided to remain free of charge – using the expiry date regulation as the basis of their revenue model – in order to target the dual market of small independent businesses and visitors, with a strong business-oriented strategy. Thanks to the case study and questionnaire survey, we participated in the business model shift toward more incentive (with prizes and rewards), more convenience (online shop) and more credibility (with public transport and store chain). Econometrics indicators showed us that the LD£ respected its engagement of being both spent and kept, but not enough to be profitable for The Lakes Currency Project, and thus support the two foundations.

Consequently, in terms of climate action and ecological footprint mitigation, as half of The Lakes Currency Project profits go to the Lake District Foundation, the LD£ was supposed to indirectly facilitate the planting of 400 local trees. Supported in November 2018, this project is expected to capture approximately 400 tonnes of carbon, or 1,468 tonnes of carbon dioxide (Lake District Foundation 2018; Ecometrica 2011). The Lakes Currency Project aims to be profitable for its second year of operation, unlike its first fiscal year, and thus participate in this tree planting programme. Nevertheless, by encouraging the use of public transport among its users – and thus sustainable transport which could be measured through a future survey – the LD£ could directly participate in climate action and carbon reduction.

The LD£ revenue model is based on a leakage. Therefore, the more currency is issued, the more currency is expected to be kept (by the users to cover costs and even create a profit for the charities). Reaching approximately LD£150,000 issued in 2018, The Lakes Currency Project is currently aiming for LD£500,000 issued in 2019 (LD£1,000,000 being their ideal goal at launch), but with a third of the budget of 2018 in 2019. This lack of budget for the second year of operation had an impact in the business improvement: especially on the development of a digital application for smartphone to locate the traders; and the launch of the LD£ digitally-issued currency and mutual credit to encourage business-to-business exchange and to increase the local supply-chains – with its inherent carbon reduction benefits for the food and drink industry within the local hospitality and retail sectors.

Furthermore, the implementation of a digital currency could be the main driver to overcome the lack of convenience (bureau de change, reward/prize steps) and trust (money back, acceptance awareness) of a paper currency. Indeed, in this new era of cashless society and with this new trend of cryptocurrency, both

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shoppers and shopkeepers may find modern contactless payments – with a card, a smartphone or a smartwatch – more practical and reliable than old payment systems – such as coins, notes or cards.

Indeed, a digital initiative could help the LD£ to be more user-friendly, and in turn would potentially scale up the project – by improving the convenience and trust of transactions for users and between traders – and support a transition towards low-carbon societies through the self-determined creation of more sustainable communities (Bendell and Greco, 2013). However, if this digital currency could not be collected as a souvenir, it could negatively impact the LD£ revenue model – unless it changes.

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Conclusion: not successful yet, but potentially impactful.

What are the initial conditions which influence the implementation of a local currency in a National Park and World Heritage site? In the specific case of the LD£ implementation, the unique natural landscape and historical culture of the Lake District National Park brought a relevant historical background. Even though the tourist sector could be seen as a threat for the conservation of this World Heritage site, it is an undeniable financial windfall – part of this unique regional context – which encourage the creation of a social enterprise to target these visitors in order to give their money back to the local economy and community. Surrounded by contactless payment and costly voucher schemes, the LD£ stand out from the crowd – as a free paper currency system, free from surveillance and without transaction fees.

How to measure the impact of a local currency initiative in rural context impacted by substantial tourist influx? Seen as a pure economic tool, an obvious way would be to compare the impact of the LD£ with the common usage of GBP. However, interdisciplinary by nature, the impact assessment and improvement of a currency has to be holistic, on the form and substance – method and theory – on the style and content – format and findings. Using an integrative methodological framework – called Integral Methodological Pluralism as seen above – seems to be a matter of course. Consequently, the impact of a currency is plural, not purely empirical, not exclusively about local spending or ecological benefits, such as carbon reduction.

Does this currency innovation have the potential to become a social and sustainability innovation and to support the local economy and community? Seen as a financially viable project for a social enterprise, no surplus has been generated for the first year of operation – which is usual for a start-up which aims to reach its tipping point in 3-5 years. By combining the impact analysis of four complementary techniques, we found that the LD£ – as a singular currency scheme – could not only provide a fun and unique experience for a passionate protagonist (autoethnography), but also include a myriad of different stakeholders in a common questioning process around the need of local economy and community support (participatory action research). Despite exploring various value proposition, the single revenue model – based on yearly expiry and leakage – has not been successful yet to provide a financial viability and a profit going to charities (case study and questionnaire survey). Concerning the amount of units beyond the average of the field at its launch – with approximatively two-thirds of local spending and one-third of denomination collection for its first year of operation – the LD£ velocity was comparable to the GBP one (econometrics).

With a specific focus on measuring the impact of local spending in a rural context – where communities are adversely impacted through a substantial tourist influx – we can not claim through this study that the LD£ supported local independent businesses by encouraging local inhabitants and many of the visitors to buy local, (and further research need to be done on this question). Furthermore, with regard to giving its profit to two community and sustainability foundations, the LD£ has not yet reached this aim. Based on

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this analysis, we could not conclude yet that the LD£ supported the local economy (local independent businesses) and community (charities for community support and environmental conservation).

Nevertheless, as seen above, the LD£ brought various and numerous stakeholders (users, traders, partners) around the question and need of local economy and community support – and provided an anecdotal but specific mindset to one person. The LD£ is a social innovation – having a social impact among its stakeholders yet to be rigorously proven – but not yet a sustainability innovation – not having an environmental impact by improving the local spending and local supply chain for ecological footprint mitigation. Could the LD£ advocacy raise the profile of its stakeholders about the need to support local economy and community, or even climate crisis, action and resiliency? Could the LD£ shift the viewpoint, transform the behaviours, change the perceptions of its stakeholders? Further research would be needed, using different methodologies, to address these questions.

Furthermore, by not being able to encourage Lakeland traders – tradesmen and services providers to support each other – focussing on the impact of local currency purchasing to stimulate purchase and supply, the LD£ did not improve the local supply-chain yet.

If a digital payment system was to make this voucher scheme more trustworthy and convenient to use, it might make the LD£ more effective and impactful, by encouraging more local spending and local supply-chain. As a vector of strategic change, this digital payment system might increase the sales but decrease the leakage, its unique current source of the revenue. In any cases, rethinking its business model seems obvious.

During its first year of operation, the LD£ might not have been successful according to its ambitious business and economical goals (no financial profitability, not achieving assumed goals: reaching only 15% of their ideal goal of currency issue), even though in accordance with the visitor market potential of the region. Nevertheless, the LD£ has the potential to become an impactful currency (in a holistic and integral perspective by having a significant influence on the community and territory) by providing a unique visitor experience (passport stamp trail, iconic leading figures) and raising the topic of local economy and community support among various stakeholders. Certainly, this awareness raising, viewpoint shift and perception transformation of the stakeholders still need to be investigated. But implementing a new currency in a specific territory and community is already an appeal for a paradigm change, by arousing curiosity of all stakeholders.

Finally, from a scholarly perspective, this research study and paper, by implementing an integrative methodological framework for the impact assessment and improvement of currency systems is bringing a novel contribution of the field of currency innovation. However, each of the four methods would need further data collection and analysis, and other complementary methods – respecting integral research quadrants – would provide a broader investigation of the currency phenomenon.

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