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#### INTEGRATIVE REVIEW OF INTEGRAL, MIXED AND CREATIVE METHODS RESEARCH APPROACHES TO CURRENCY INNOVATION AND ITS IMPACT—THROUGH 102 ARTICLES PUBLISHED IN THE INTERNATIONAL JOURNAL OF COMMUNITY CURRENCY RESEARCH FROM 1997 TO 2013 AS A PRELIMINARY STUDY

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**Abstract:** I was surprised to discover that not one-eighth (12.7%) as previously found in 2013 but five-seventh (69.6%) of its articles were actually dealing with currency impact assessment—of which one-third (33.8%) were a positive impact and seven-eighth (88.7%) were aiming at sustainable development objectives. Moreover, all 102 articles investigated currencies involving 2.55 of the 5 pillars of sustainable development and targeting 4.66 of the 17 Sustainable Development Goals—confirming what was already suspected about them. Finally, one-nineth (11.8%) used at least one of these meta-theoretical paradigms; one-third (34.3%) used a 'mixed methods' research; one-half (47.1%) used some 'creative research' methods excluding 'mixed methods' research; and three-fifth (60.8%) used more than one methodological family—for an average of 1.78 of these 8 methodological families for all 102 articles. Knowing that authors came from some 16 different disciplines.

**Keywords**: integral theory, critical realism, complex thought, integral methodological pluralism, mixed methods research, creative methods research, multiple methodology, impact assessment, literature review, integrative review, historical atlas, implementation guide, impact assessment matrix, university. **JEL**: A12 B41 G23. Q01.

#### 1. Executive summary

After an introduction of the previous literature reviews on currency impact assessment which revealed a research gap which led me to develop an 'impact assessment matrix' prototype (already used to assess 10 complementary currencies), I describe how I came to follow the advice of the mastermind Bernard LIETAER—who introduced me to the complementary currency movement in 2009—to use an integral approach to the study of money—according to Ken WILBER's Integral Theory alias the 'EINSTEIN of Consciousness' that he met in 2004 and to Christian ARNSPERGER's Full-Spectrum Economics that he reviewed in 2010.

Going deeper into the subject, I discovered the meta-theoretical paradigms of Edgar MORIN's Complex Thought, Ken WILBER's Integral Theory, Roy BHASKAR's Critical Realism, and Sean ESBJÖRN-HARGENS's Complex Integral Realism. The latter advocates the use of

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multi-methodological frameworks to investigate complex phenomenon—especially Integral Methodological Pluralism which invites the use of up to 8 methodological families.

While exploring some synergies with 'mixed methods' research and 'creative research' methods, I decided to apply no less than 6 methodological families for the impact assessment of the Lake District Pound issued in a National Park and World Heritage Site in England during 20 months in 2018–2020. By doing so, I revealed its educational impact for monetary reform beyond a purely economic one for localism (e.g. local spending or supply chain for carbon mitigation) as expected by the usual methodologies (e.g. systems theory, econometrics).

Time for me to check whether currency innovation research had already used such integral approach in the past. For this reason, I proceeded to the integrative review of integral, mixed and creative methods research approaches to currency innovation and its impact—through 102 articles published in the International Journal of Community Currency Research from 1997 to 2013 as a preliminary study.

I was surprised to discover that not one-eighth (12.7%) as previously found in 2013 but fiveseventh (69.6%) of its articles were actually dealing with currency impact assessment—of which one-third (33.8%) were a positive impact and seven-eighth (88.7%) were aiming at sustainable development objectives. Moreover, all 102 articles investigated currencies involving 2.55 of the 5 pillars of sustainable development and targeting 4.66 of the 17 Sustainable Development Goals—confirming what was already suspected about them.

Finally, one-nineth (11.8%) used at least one of these meta-theoretical paradigms; one-third (34.3%) used a 'mixed methods' research; one-half (47.1%) used some 'creative research' methods excluding 'mixed methods' research; and three-fifth (60.8%) used more than one methodological family—for an average of 1.78 of these 8 methodological families for all 102 articles. Knowing that authors came from some 16 different disciplines.

To promote this integral research and education on money networking, organizational management, entrepreneurial leadership, and impact research, I aspire to not only conceive an historical atlas and implementation guide for these currency initiatives, but also develop another impact assessment matrix as well as a university.

#### 2. Introduction

Use the same tool to achieve a different vision? For those with a hammer, all problems are nails!

"No problem can be solved from the same level of consciousness that created it. [...] Insanity is repeating the same mistakes and expecting different results." — Albert Einstein.

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." — Richard Buckminster Fuller.

"We see what we are ready to see" (alias 'I do not see what I do not want to see') and by using the same "labelling" (e.g. backward primitive economy of premodern decentralized community vs progressive capitalist economy of modern centralized state), one is preventing oneself from discovering other types of economic tools or means of exchange—as do most of the scientists, academics or researchers among social science disciplines such as economics, anthropology, or sociology—hence the absence of wording for "The \* Hypothesis" of Irene Sotiropoulou (Sotiropoulou, 2012, p. 77–78).



Indeed, by entering into a dualist vision of conflictual opposition through the postmodern anticapitalist discourse of heterodox economics against the modern capitalist discourse of neoclassical economics, one is inevitably reducing all monetary alternative proposals to the unconventional and marginal (for such is the power of words to reflect and feed limiting beliefs on an ongoing basis so as not to discover the 'true truth' and the 'real reality').

This could probably be the reason why complementary currency is not the focus of attention or interest of the conventional or mainstream economics—which would allow us to name "The \* Hypothesis" of Irene Sotiropoulou previously stated as 'The lack of transdisciplinary, evolutionary or integral perspective Hypothesis' to investigate a complex phenomenon.

Besides, this rejection of a specific 'quadrant' or 'level' for the benefit of another one has been deeply and rigorously theorized by Ken Wilber's Integral Theory as 'level reductionism'<sup>2</sup> or 'quadrant reductionism'<sup>3</sup> (alias 'flatland') (Helfrich, 2007). Moreover, the reduction or conflation of the domain of the 'real' to the domain of the 'actual' and/or 'empirical' has been described as the 'actualism's fallacy' by Roy Bhaskar's Critical Realism (Hedlund, 2013). And lastly, problem-solving abilities by guessing, preferring, believing a solution has been defined as 'simple thought' by Edgar Morin's Complex Thought (which consists in proposing hypotheses for solutions by creating relationships, searching for criteria, relying on valid justifications, and self-correcting) (Montuori, 2013).

This article aims to give a bird's-eye-view on how people perceive, understand, design, use, and assess Money as well as the influence of Money on people's beliefs, behaviours, values, collaborations (alias 'four quadrants' of Ken Wilber's Integral Theory)—and on how currency innovations or networks help to build relevant bridges within and between communities from different evolutionary development (alias 'development levels'; resp. premodern, modern, postmodern, 'post-postmodern').

To do so, I will present my past, present, and future journey for the integral impact assessment and integral definition of Money. Because by broadening the definition of impact and Money, I will discover some unexpected impacts of Money.

After an overview of some literature reviews on currency impact assessment, I will present four integral approaches already achieved: an 'impact assessment matrix' prototype which assessed already 10 complementary currencies; a multi-methodological framework which assessed 1 local currency; a new definition of money partially validated; a preliminary integrative review of the methodology used to investigate currency and its impact.

This being the intermediate data that will be used for four other integral approaches to be carried out soon: a historical atlas; an implementation guide; an integral matrix; an integral university.

<sup>&</sup>lt;sup>2</sup> 'Level reductionism' of 'all levels' to one (*alias* extreme vertical 'hierarchical' 'flatland', *e.g.* relativists reduce 'all levels' to their pluralistic and holistic absence of absolute transcendence).

<sup>&</sup>lt;sup>3</sup> 'Quadrant reductionism' of 'all quadrants' to one (*alias* extreme horizontal 'heterarchical' 'flatland', *e.g.* behaviourists reduce 'all quadrants' to the exterior–individual upper right 'quadrant' of objective reality of observable behaviour).



#### 3. Literature reviews about currency impact assessment, a quick overview of the room for improvement

It is important to note that literature reviews are usually differentiated between narrative literature review<sup>4</sup> and analytical literature review<sup>5</sup>.

About one-fifth  $(18.3\%)^6$  of all the contributions listed in 2010 in the Bibliography of Community Currency Research database (CC-Literature) were systematic empirical studies about specific exchange systems (e.g. country investigations, activist reports, etc.) which could be considered as impact reports—as first published in 2011 through an analytical umbrella review<sup>7</sup> (Schroeder et al., 2010, p. 216–222 apud Schroeder et al., 2011, p. 34, 38).

About one-fifth (18.7%)<sup>8</sup> of the English sources listed in 2012 in the Bibliography of Community Currency Research database (CC-Literature) appeared with terms related to impact assessment—as first published in 2012 through an analytical scoping review<sup>9</sup> (Place, 2012c, p. 12).

About one-eighth (12.7%)<sup>10</sup> of the papers published between 1997 and 2013 in the peerreviewed International Journal of Community Currency Research (IJCCR) dealt with an impact evaluation approach of Complementary Currency Systems (CCS)—according a literature review carried out in 2013 and only published in 2015 (Place and Bindewald, 2013a, p. 7–8 apud Place and Bindewald, 2015b, p. 154). It is important to note that this literature review was indeed only an analytical rapid review<sup>11</sup> of which studies of complementary currencies—within its leading academic journal—were using an impact assessment approach in the strict sense of the term.

In average, about one-sixth (16.6%) of research on CCS is dealing with impact report, assessment or evaluation. There is therefore a research gap in the literature about currency impact assessment.

<sup>&</sup>lt;sup>4</sup> Alias traditional review; *i.e.* to critique a body of literature and identify inconsistencies in a body of knowledge.

<sup>&</sup>lt;sup>5</sup> Alias formal assessment review; *i.e.* a particular method and rigorous appraisal according to some specific criteria of inclusion and exclusion of the literature to be reviewed—to reveal what is known or remains unknown as sorted and organized results—quantitative statistics or qualitative synthesis—of a transparent, thorough and comprehensive search of selective keywords in relevant bibliographic databases in order to condense and make sense of a large body of research.

<sup>&</sup>lt;sup>6</sup> "The databank comprises 1'099 titles [...]. The database identifies 201 contributions with information about specific exchange systems or groups of systems — these are systematic empirical studies, sometimes country surveys of certain types of systems, and sometimes reports from activists." (SCHROEDER *et al.*, 2010, p. 216–222 *apud* SCHROEDER *et al.*, 2011, p. 34, 38).

<sup>&</sup>lt;sup>7</sup> *I.e.* analytical review of of the results of broad conditions or competing interventions from multiple literature reviews of compiling and compelling evidence—by analyzing secondary knowledge sources of data known as reviews of studies.

<sup>&</sup>lt;sup>8</sup> Among the 1'251 sources of the Bibliography of Community Currency Research database in 2012, 406 were in English, and only 76 appeared by searching the following keywords: impact, evaluation, measure, rating, audit, indicator, scorecard, assessment, monitoring, performance (30, 21, 14, 5, 3, 2, 1, 0, 0, 0 sources extracted respectively).

<sup>&</sup>lt;sup>9</sup> *I.e.* analytical review of a preliminary assessment of the potential quantitative size and qualitative scope of all the available literature on a specific topic without any restriction on the materials sourced—by identifying the nature and extent of the research evidence according to the quality of its study design and by including viable and ongoing research in progress.

<sup>&</sup>lt;sup>10</sup> Among the 102 papers, published from 1997 to May 2013 in the 17 volumes and 2 special issues, 13 papers are dealing with pertinent impact analysis: WILLIAMS Collin C. in volume 1 of 1997; INGLEBY Julie in volume 2 of 1998; LAACHER Smaïn in volume 3 of 1999; CAHN Edgar S. in volume 5 of 2001; SEYFANG Gill in volume 6 of 2002; WHEATLEY Gerald, JACOB Jeffrey, BRINKERHOFF Merlin, and JOVIC Emily in volume 8 of 2004; SCHROEDER Rolf F.H. in volume 10 of 2006; GELLERI Christian in volume 13 of 2009; NAUGHTON-DOE Ruth in volume 15 special issue of 2011; SOTIROPOULOU Irene in volume 15 special issue of 2011; THIEL Christian in volume 15 special issue of 2011; MOLNAR Stefan in volume 15 of 2011; SCOTT CATO Molly, and SUÁREZ CASADO Marta in volume 16 special issue of 2012.

<sup>&</sup>lt;sup>11</sup> *I.e.* analytical review of an assessment of the established and existing literature about a specific policy or practical issue by systematically searching and critically appraising a determined size and scope of materials according to their quality and future direction-



Not to be confused with the overall impact comparison—as a narrative generic overview<sup>12</sup> for lack of an analytical qualitative<sup>13</sup> or quantitative<sup>14</sup> meta-analysis—of 3 leading literature reviews until 2015 that assessed the actual impact of CCS (Place and Bindewald, 2013a, p. 9 apud Place and Bindewald, 2015b, p. 155):

- Overall positive impact through an analytical mixed methods systematic review<sup>15</sup>: positive impact with high social sustainability, limited economic benefits, and few environmental outcomes has been demonstrated with systematic literature review of 1'175 studies of complementary currencies from 1993 to 2013 (Michel and Hudon, 2015).
- Overall neutral impact through an analytical mapping review<sup>16</sup>: neutral objectives, mainly economic and social with few environmental goals, have been analyzed with reference to a study of 3'418 currency-related projects from 1996 to 2011 (Seyfang and Longhurst, 2013).
- Overall negative impact through a narrative state-of-the-art review<sup>17</sup>: 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).

There is therefore a research gap in the literature about currency impact improvement. But it is clear that it is the definition of the impact sought by the currency project leader or even the currency impact assessor that will define whether the currency has an impact or not—in the strict or broad sense of the term.

## 4. Currency impact assessment framework and matrix prototype, a first integral approach

In Full-Spectrum Economics (alias 'integral economics')—published in 2010 with a foreword by Ken Wilber (Arnsperger, 2010b; Arnsperger, 2010a) and reviewed by Bernard Lietaer the same year (Lietaer, 2010)—Christian Arnsperger invites economists to apply Ken Wilber's Integral Theory (IT) alias the 'Einstein of Consciousness' (Wilber, 1995; Wilber, 1996; Wilber, 2000). And yet, Bernard Lietaer—the original thought leader of the complementary currency movement—already used in 2005 its 'four quadrants'<sup>18</sup> on the concept of Money through An

<sup>&</sup>lt;sup>12</sup> Alias conceptual review; *i.e.* narrative review of recent or current literature with descriptive summary or categorization survey of a wide range of subjects and published materials through the snapshot of a particular field.

<sup>&</sup>lt;sup>13</sup> Alias qualitative meta-synthesis review; *i.e.* analytical review with an evaluative or interpretive synthesis of the exhaustive literature of multiple qualitative studies only to identify common or new themes, concepts or core elements—by analyzing primary, secondary or tertiary knowledge sources of data and by integrating and transforming their findings into new conceptualizations and interpretations.

<sup>&</sup>lt;sup>14</sup> *I.e.* analytical review with a statistical analysis and combination of the exhaustive literature of multiple quantitative studies only to enhance their understanding, to detect patterns and relationships, and to provide a more precise analysis of the effect of their results—by measuring this effect numerically and by expecting a certain homogeneity.

<sup>&</sup>lt;sup>15</sup> Alias mixed studies review; *i.e.* analytical review of the results, processes and strategies of the combined literature of both qualitative and quantitative studies to look for correlations between characteristics.

 $<sup>^{16}</sup>$  *I.e.* analytical review of existing literature to identify the need for further reviews of primary, secondary or tertiary knowledge sources of data according to the quality of their study design.

<sup>&</sup>lt;sup>17</sup> *I.e.* narrative review of the most recent and extensive literature conducted periodically with a description of the current state of knowledge, matters and disagreements according to the priority for future investigation.

<sup>&</sup>lt;sup>18</sup> Four irreducible dimensions of reality or actual aspects of the world that are always present in each moment (*alias* 'quadrants'; *i.e.* individual–interior or subjective quadrant, individual–exterior or inter-subjective quadrant, collective–interior or objective quadrant, collective–exterior or inter-objective quadrant)—that born together and simultaneously arise and mutually inform or implicate each other (*alias* 'co-nascent' and 'dependent co-arising' or 'tetra-mesh'; *i.e.* transcending and including): subjective experience and intentionality; inter-subjective cultural realities and values; objective behaviours and neuronal psychology; inter-objective ecological and social systems.



Integral View on Money and Financial Crashes (Lietaer, 2005b, p. 2 apud Place, 2010, p. 152) and its 'development levels'<sup>19</sup> on the history of Money in Economics as an Evolutionary System with Stefan Brunnhuber (Lietaer and Brunnhuber, 2005a)—after he met him at the same time as Ken Wilber in 2004<sup>20</sup> (Krause, 2021).

After having discovered Sex, Ecology, Spirituality of Ken Wilber (Wilber, 1995) by chance by wandering in a bookshop on 27 February 2010 when looking for a book for my partner at the time, I finally did the same by distributing or categorizing some 71 indicators of currency progress measurement in an 'impact assessment matrix' (IAM) prototype among the 'four quadrants' of IT as well as the 5 pillars of sustainable development<sup>21</sup>—in an article presented in 2015 and published in 2018<sup>22</sup> (Place, 2015a apud Place, 2018c).

The impact assessment framework developed with Leander Bindewald (Place et al., 2013b apud Place and Bindewald, 2013a apud Place and Bindewald, 2015b) as well as my IAM prototype (Place, 2015a apud Place, 2018c) has been cited and used in 2 master's dissertations (Mossay, 2018; Langeder, 2018) and cited in 1 evaluation guide, 2 other master's dissertations and 1 doctoral thesis (Bindewald and Steed, 2013; Ballerini and Bartolomucci, 2018; Sillen et al., 2019; Bindewald, 2018)—to the best of my knowledge.

Since 2015, this IAM prototype has been already used by 3 researchers to assess the impact of a total of 10 complementary currencies in Switzerland, France, Belgium, South Africa, and England<sup>23</sup> (Place, 2015a apud Place, 2018c; Mossay, 2018; Langeder, 2018; Place, Forthcoming). A comparative case study of the results remains to be done.

By expanding the number and type of qualitative and quantitative indicators as much as possible (up to 71 indicators of currency progress measurement), this was my first attempt to not only incorporate an integral approach into currency impact assessment; but also give a broader definition of impact.

<sup>&</sup>lt;sup>19</sup> Ordered and common structures of development and evolution (*alias* 'levels'; *i.e. premodern* level, *modern* level, *postmodern* level, 'post-postmodern' level)—occurring at or correlated with the same 'level' of depth and complexity in a general pattern of development and evolution (*alias* 'holarchy' of whole/part 'holons'; *i.e.* transcending and including): *premodern* society or era level focus on subjective 'quadrant' (*i.e.* many levels of existence, divine origin of man, 'Great Chain of Being'); *modern* society or era level focus on objective and inter-objective 'quadrants' (*i.e.* rise of science, autonomy of the ego, cultural progress); *postmodern* society or era level focus on inter-subjective 'quadrants' (*i.e.* meaning based on context, human ego not absolute, multiculturalism); 'post-postmodern' society or era level focus on 'all quadrants' (*i.e.* multidisciplinary, interdisciplinary, transdisciplinary, complexity, holistic, integral).

<sup>&</sup>lt;sup>20</sup> *I.e.* when he was invited to "'The Money Crunch: Complementary Currency Solutions' conference in Boulder, Colorado, in May 2004, where [Bernard] LIETAER and [Stefan] BRUNNHUBER met and had a long conversation with Ken WILBER, whose integral philosophy [Bernard] LIETAER valued highly as it shared so much with his own world view." (LIETAER [p.c.] apud KRAUSE, 2021, p. 102–103).

<sup>&</sup>lt;sup>21</sup> Sustainable development is usually articulated around 3 to 5 pillars or dimensions: economic, social, and environmental—sometimes even extended to governance and cultural.

<sup>&</sup>lt;sup>22</sup> *I.e.* as the first ever article about the application of integral research approach to currency impact assessment in the *International Journal of Community Currency Research*—to the best of my knowledge.

<sup>&</sup>lt;sup>23</sup> Resp. Monnaie Léman in Greater Geneva in France and Switzerland (PLACE, 2015a apud PLACE, 2018c); Le Val'heureux in Liège, Troeven in Turnhout, L'Accorderie in Mons, RES in Belgium (MOSSAY, 2018); Le Florain in Nancy, Le Cairn in Grenoble, La Gonette in Lyon in France, GEM Going the Extra Mile Project in South Africa (LANGEDER, 2018); Lake District Pound in the Lake District National Park in Cumbria in England in United Kingdom (PLACE, Forthcoming).



### 5. Meta-theoretical paradigm and multi-methodological framework for a currency impact assessment, a second integral approach

Following a new meta-theoretical paradigm<sup>24</sup> going further and completing Ken Wilber's Integral Theory (Bhaskar et al., 2015; Esbjörn-Hargens and Hedlund, 2022; Esbjörn-Hargens and Hedlund, In Press) to investigate complex phenomena—such as Money—by implementing its multi-methodological framework called Integral Methodological Pluralism (IMP) with its 'eight zones'<sup>25</sup> (Esbjörn-Hargens, 2006, p. 102–104; Esbjörn-Hargens, 2010, p. 50–53), I assessed with 6 methodological families<sup>26</sup> the impact of this 1st touristic local currency issued in a National Park and World Heritage Site in 2018–2020<sup>27</sup> (Place et al., 2021g)—as a synthesis of three other articles (Place and Bendell, 2019a; Place and Lafferty, 2019c; Place, 2021b):

"[T]he Lake District is the most visited and richest National Park in one of the poorest counties in the country—creating a tension between agricultural or tourism development and culture or nature conversation—which the Lake District Pound (LD£) aimed to resolve in part by targeting visitors with local leading figures, supporting local independent businesses, and giving its profits to local charities. [...] As a result, the interaction with this complementary currency moderately impacted the local spending but reasonably raised awareness of localism and monetary economics among participants." (Place, 2021b, p. 39, 40).

By broadening the disciplinary spectrum of this research—from monetary economics to economic anthropology for instance—the findings were even more extensive—by revealing its educational potential for monetary reform—than the simple political and environmental

<sup>&</sup>lt;sup>24</sup> *I.e.* the merger of Edgar MORIN's Complex Thought (subject, epistemology), Ken WILBER's Integral Theory (framework, methodology), and Roy BHASKAR's Critical Realism (object, ontology) into Sean ESBJÖRN-HARGENS'S Complex Integral Realism (paradigm, theory).

<sup>&</sup>lt;sup>25</sup> Eight methodological families associated to multiple methods, practices and techniques (*alias* 'zones'; i.e. *phenomenology* or subjective inside zone, *structuralism* or subjective outside zone, *hermeneutics* or inter-subjective inside zone, *empiricism* or inter-objective outside zone, *social autopoiesis* or objective inside zone, *systems theory* or objective outside zone)—to insure a pragmatic and inclusive approach in the investigation of a phenomenon (*alias* inside/outside zone of each 'four quadrants' and methodological family of each 'development level'; *i.e.* transcending and including): *phenomenology* of direct experience (*i.e.* 'phenomenological–inquiry'); *structuralism* of recurring patterns of direct experience (*i.e.* 'structural–assessment'); *hermeneutics* of understanding between people (*i.e.* 'hermeneutical–interpretative'); *ethnomethodology* of recurring patterns of self-regulating behaviour (*i.e.* 'autopoiesical'); *empiricism* of observable behaviours (*i.e.* 'empirical–observation'); *social autopoiesis* of self-regulating dynamics in systems (*i.e.* 'social autopoiesical'); *systems theory* of observable whole (*i.e.* 'systems analysis').

<sup>&</sup>lt;sup>26</sup> *Hermeneutics*: participatory action research (19 stakeholders' mapping to analyze its business model): by considering 10 stakeholders (i.e. Independent Money Alliance, Lake District National Park Authority, Lake District Foundation, Cumbria Community Foundation, University of Cumbria, project leader, impact investors, bureaux de change, stores, residents/visitors), the revenue model was based on a numismatic currency to be kept/collected rather than an economic currency to be spent/saved. Systems theory: econometrics accounting (7 months' ledger to estimate its circulation and leakage): this pioneering revenue model has been validated (2/3 kept, 1/3 spent) after a year of operation, but only represented less than one-tenth of their projected target-not enough to generate any profit for two charities (environmental conservation, community support). Structuralism: autoethnography (8 relatives' experiential feedback to study its value proposition): its value proposition was in line with related experiences: having a fun and unique experience on holiday-although having received too little change back in the complementary currency from participating stores. Empiricism: case study (269 participants' surveys to assess their behaviours and collaborations): the lack of commercial incentive, the inconvenience of exchanging cash in some bureaux de change, and the restrictive annual expiration date caused his premature end-despite the success of the marketing strategy. Ethnomethodology: ethnography (49 participants' interviews to investigate their beliefs and values): targeting residents as much as visitors, extending the network of participating stores, developing a digital currency, and pedagogically address the money taboo in a bottom-up approach could improve this monetary scheme-which has nonetheless promoted the region. Phenomenology: meditation and fasting (7 practitioners' interviews and 1 practitioner's description to evaluate the root of expenditure): these practices can help balance the cravings and aversions of our minds and bodies-including spending and consumption.

<sup>&</sup>lt;sup>27</sup> *Viz.* Lake District Pound issued during 20 months from 01 May 2018 to 31 January 2020 in the Lake District National Park and World Heritage Site in the county of Cumbria county in England country in United Kingdom—as a world premiere.



economics perspective originally intended<sup>28</sup>—by adding up to 8 or even 14 integral, mixed and creative methods (Place, 2021f; Place, 2021e; Place, 2021d; Place, 2021c; Place, 2021a; Place, Forthcoming).

In this particular case, I gave a broader definition of impact by using multiple methodologies to multiply my paradigmatic prism—in order to investigate the impact of a complex phenomenon rather than limiting impact to a single disciplinary lens—with an emphasis on transdisciplinary breadth/span rather than disciplinary depth/mastery to obtain a fuzzy big picture instead of a clearly defined focus.

# 6. Integral Money definition hypothesis validation to extend currency impact definition, a third integral approach

In the words of Bernard Lietaer about money research according to the 'four quadrants': "95% of all research [or] literature about money [...] [resides in] the upper right 'quadrant' (individual–exterior) [which] deals with how individuals can earn more money, spend, invest or give their money" as a description of the inner behaviour of economic agents (Lietaer, 2005b, p. 2).

Although there is much literature in the lower right 'quadrant' (collective–exterior) on the effects and interactions of the monetary and economic systems on social and environmental aspects, little of it focuses on the systemic causes responsible for the stability and viability of the monetary system itself (e.g. higher monetary diversity and interconnection for a polyculture resiliency instead of a monoculture efficiency) (Lietaer et al., 2009 apud Lietaer et al., 2012).

Some self-help books can be found in the upper left 'quadrant' (individual-interior) about one's personal and emotional relationships with money—including an excellent personal development and psychological work to free oneself from limiting beliefs (Koenig, 2003).

Much scarcer is research and understanding about the lower left 'quadrant' (collective-interior) which aims at the interpretation of the collective meaning and definition of money through its cultural context through political history, or its normative discourse sometimes (Bindewald, 2018), or even by elucidating the archetypal dimensions underlying the "irrational exuberance" of financial market bubbles and busts (Lietaer, 2005b, p. 2–3).

It is with this in mind that I decided to test this definition hypothesis of Money as an integral object of inquiry (alias Integral Money) that involves, influences or affects all 'four quadrants' as follows (resp. individual–exterior, collective–exterior, individual–interior, collective–interior):

Money is a changing rule and an evolutive concept which encourage behaviours and collaborations, as well as activate beliefs and values<sup>29</sup>.

So far, I partially validated this definition hypothesis through a thematic analysis of 6 selective codes (viz. rule, concept, behaviour, collaboration, belief, value) identified in 77 out of 2'193

 $<sup>^{28}</sup>$  *I.e.* the impact of a currency is plural (*e.g.* educational/pedagogical potential for monetary reform/rethink); neither purely empirical, nor exclusively economical (*e.g.* local spending or supply chain for carbon mitigation)—as originally envisaged by the research project.

<sup>&</sup>lt;sup>29</sup> The rule of Money changes through humankind's history and involves the exterior aspects of an individual or a collective which are behaviours (individual–exterior) and collaborations (collective–exterior). The concept of Money evolves through one's life and involves the interior aspects of an individual or a collective—which are beliefs (individual–interior) and values (collective–interior).



quotations—extracted from 7 qualitative data collections conducted among 240 stakeholders of the LD£ from August to December 2018 and 2019 (Place et al., 2021g, p. 42).

Indeed, to extend the definition of the impact of an object of investigation, it is also necessary to extend the definition of the object itself—which is Money in the case in question.

# 7. Integrative Review of integral, mixed and creative methods research approaches to currency, a fourth integral approach

I am currently conducting an analytical integrative review<sup>30</sup>—as a combination of an analytical qualitative and quantitative meta-analysis—of integral, mixed and creative methods research approaches to CCS of 192 articles published in the IJCCR from 1997 to 2021 (PLACE, Forthcoming). From 15 August 2022 to 21 September 2022, I reviewed all 102 articles published between 1997 and 2013—which revealed many other unexpected findings that will not be covered in this paper.

As Money is usually considered as a social and economic system<sup>31</sup> (*i.e.* object of study in economic and social sciences), it is generally accepted that *systems theory* (*i.e.* interdisciplinary study of complex systems<sup>32</sup>) is the theoretical paradigm (*e.g.* monetary economics<sup>33</sup>) or methodological framework (*e.g.* econometrics<sup>34</sup>) the most appropriate and commonly used for the investigation of monetary systems (INGLEBY, 1998, p. 2).

And yet, this integrative review proves the contrary in the context of complementary currency since only 29 out of 102 articles (28.4%) have used methodological families from *systems theory* and only 15 out of 102 articles (14.7%) have used quantitative methods of econometrics (*e.g.* monetary multiplier effect, velocity, circulation, turnover, leger, accounting, transaction, *etc.*). Meaning that only about one-fifth (21.6%) have used close methodological criteria restricted to *systems theory* or econometrics in the strict sense of impact. This is certainly due to the fact that the researchers or practitioners came from some 16 different scientific disciplines<sup>35</sup>—thus revealing the multidisciplinary, interdisciplinary or transdisciplinary aspect of complementary currency studies.

As revealed in this analytical integrative review, according to open methodological criteria extended to all existing methodological families in the broad sense of impact, 71 out of 102 articles or five-seventh (69.6%) were proceeding an impact assessment of CCS—from which 5 out of 71 or one-fourteenth (7.0%) were negative, 42 out of 71 or three-fifth (59.2%) were neutral, and 24 out of 71 or one-third (33.8%) were positive. Furthermore, 29 out of 102 articles or two-seventh (28.4%) were proposing an impact framework and 29 out of 102 articles or two-seventh (28.4%) were encouraging an impact evaluation.

<sup>&</sup>lt;sup>30</sup> Alias inclusive review; *i.e.* analytical review of a specific subject or guiding issue from the integrated theoretical and methodological literature of both quantitative and qualitative studies with related or identical research hypotheses or questions in order to critically evaluate their rigour and characteristics, to generate new frameworks or perspectives, to define concepts, analyze issues and refine theories or methodologies—by reviewing, synthesizing, criticizing and integrating these studies.

<sup>&</sup>lt;sup>31</sup> *I.e.* a group of interacting or interrelated elements that act according to a set of rules to form a unified whole.

<sup>&</sup>lt;sup>32</sup> *I.e.* cohesive groups of interrelated and interdependent components that can be natural or human-made.

<sup>&</sup>lt;sup>33</sup> *I.e.* economic study of the different competing theories of money; and macroeconomic framework for analyzing the functions of money—such as medium of exchange, store of value and unit of account.

<sup>&</sup>lt;sup>34</sup> *I.e.* application of statistical methods to economic data in order to give empirical content to economic relationships.

<sup>&</sup>lt;sup>35</sup> *Viz.* currency, economics, finance, banking, informatics, management, development, law, policy, politics, sociology, history, geography, urbanism, sustainability/environment, arts.



In terms of the objectives of the currencies studied<sup>36</sup>, 39 out of 97 articles or two-fifth (40.2%) were investigating currencies aiming at economic objectives—of which 2 were about distributed ledger technologies—whereas 86 out of 97 articles or seven-eighth (88.7%) were investigating currencies aiming at social, environmental or territorial objectives (*alias* sustainable development objectives).

Concerning the 5 pillars of sustainable development<sup>37</sup>, all 102 articles investigated currencies involving 2.55 of these 5 pillars in average or one-half (51.0%). As for Sustainable Development Goals (SDGs)<sup>38</sup> or Good Life Goals (GLGs)<sup>39</sup>, all 102 articles studied currencies targeting 4.66 of these 17 goals in average or two-seventh (27.4%).

With regard to meta-theoretical paradigms using Edgar MORIN's Complex Thought, Ken WILBER's Integral Theory, and/or Roy BHASKAR's Critical Realism—without explicit reference: 12<sup>40</sup> out of 102 articles or one-nineth (11.8%) used at least one of these meta-theoretical paradigms (BHASKAR *et al.*, 2015).

About multi-methodological frameworks using integral, mixed and/or creative methods research approaches—without explicit reference: 35 out of 102 articles or one-third (34.3%) used a 'mixed methods' research<sup>41</sup> (CRESWELL and PLANO CLARK, 2017, p. 105); 48 out of 102 articles or one-half (47.1%) used some 'creative research' methods excluding 'mixed methods' research<sup>42</sup> (KARA, 2020, p. 5, 23–43); 62 out of 102 articles or three-fifth (60.8%) used more

<sup>&</sup>lt;sup>36</sup> Currency objectives: social (community, others-oriented, local solidarity); economic (commercial, self-oriented, liquidity); environmental (local consumption and production, re-use, eco-friendly behavior incentive); territorial (strengthen and stimulate a territory, a community).

<sup>&</sup>lt;sup>37</sup> Sustainable development pillars: culture (*e.g.* beliefs, habits, anthropology, philosophy, psychology, *etc.*); governance (*e.g.* transparency, consensus, disintermediated transactions, group decision-making, profit use, *etc.*); social (*e.g.* pride, inclusion, well-being, social and solidarity economy, trust compare to national currency, *etc.*); economic (*e.g.* employment, liquidity, financing of volunteering and projects, local Gross Domestic Product, percentage of dynamic turnover to nominal Gross Domestic Product at current prices, percentage of static balance of client credits to global money supply or monetary aggregate, *etc.*); environmental (*e.g.* encourage local, seasonal, organic, ethical, reuse, recycle, renewable consumption, *etc.*).

<sup>&</sup>lt;sup>38</sup> *I.e.* collection of 17 interlinked global goals set up in 2015 by the United Nations General Assembly and "designed to be a blueprint to achieve a better and more sustainable future for all" by 2030; *viz.* no poverty (1), zero hunger (2), good health and wellbeing (3), quality education (4), gender equality (5), clean water and sanitation (6), affordable and clean energy (7), decent work and economic growth (8), industry, innovation and infrastructure (9), reduced inequality (10), sustainable cities and communities (11), responsible consumption and production (12), climate action (13), life below water (14), life on land (15), peace, justice, and strong institutions (16), partnerships for the goals (17) (UNDESA, 2015).

<sup>&</sup>lt;sup>39</sup> *I.e.* behavioural and lifestyle asks for individuals that are carefully aligned with the Sustainable Development Goals (SDGs)— set of personal actions that people around the world can take to help support them—and launched by Futerra on 25 September 2018 because "for the Sustainable Development Goals (SDGs) to be reached, everyone needs to do their part: government, the private sector, civil society and people like you" according to the United Nations so by following the Good Life Goals (GLGs) we can all help make tomorrow better than today; *viz.* help end poverty (1), eat better (2), stay well (3), learn and teach (4), treat everyone equally (5), save water (6), use clean energy (7), do good work (8), make smart choices (9), be fair (10), love where you live (11), live better (12), act on climate (13), clean our seas (14), love nature (15), make peace (16), come together (17) (WBCSD *et al.*, 2018).

<sup>&</sup>lt;sup>40</sup> Among the 102 papers, published from 1997 to May 2013 in the 17 volumes and 2 special issues, 12 papers are indirectly dealing with Edgar MORIN'S Complex Thought, Ken WILBER'S Integral Theory, and/or Roy BHASKAR'S Critical Realism: SCHROEDER Rolf F. H. in volume 10 of 2006; SLATER Matthew in volume 15 special issue of 2011; BANKS Mark in volume 15 special issue of 2011; BINDEWALD Leander, BRAKKEN Marc, AUSTIN Preston, and REARICK Stephanie in volume 16 special issue of 2012; HIRAMOTO Takeshi, and NAKAZATO Hiromi in volume 16 special issue of 2012; VOLKMANN Krister in volume 16 special issue of 2012; NISHIBE Makoto, and KICHIJI Nozomi in volume 16 special issue of 2012; NISHIBE Makoto in volume 16 special issue of 2012; WAINWRIGHT Saul in volume 16 special issue of 2012; COLLOM Ed in volume 16 special issue of 2012.

<sup>&</sup>lt;sup>41</sup> Four types of complex 'mixed methods' design: experimental/intervention design (*i.e.* convergent core design of qualitative during quantitative methods); case study design (*i.e.* convergent core design of qualitative during quantitative methods); participatory-social justice design (*i.e.* explanatory sequential core design of qualitative after quantitative methods); program evaluation design (*i.e.* exploratory sequential core design of qualitative before quantitative methods).

 $<sup>^{42}</sup>$  Five key areas of 'creative research' methods: arts based research (*e.g.* visual arts, performance arts, textile arts); embodied research (*e.g.* body, somatic, senses, emotion, intuition); research using technology (*e.g.* software, social media, computer/video



than one methodological family from the 'eight zones' of IMP—for an average of 1.78 of these 8 methodological families or one-fifth (22.3%) for all 102 articles (ESBJÖRN-HARGENS, 2006, p. 102–104).

This analytical integrative review revealed that by extending the definition of impact—from a strict to a broad sense of the term—we passed from one-eighth (12.7%) to five-seventh (69.6%) of the articles published in the leading academic journal of CCS dealing with currency impact assessment (*i.e.* of 102 articles published in IJCCR between 1997 and 2013)—of which one-third (33.8%) were a positive impact assessment. Also, that the majority of the CSS studied were dealing with sustainable development objectives, pillars, or goals. And that contrary to what one might have expected, little research was using classical economics methodologies (*i.e.* systems theory, econometrics) and that a significant number of studies was involving meta-theoretical paradigms (*i.e.* Complex Thought, Integral Theory, Critical Realism) or multi-methodological frameworks (*i.e.* Integral Methodological Pluralism, 'mixed methods' research 'creative research' methods).

### Historical Atlas and Compendium of expressible, measurable, exchangeable wealth valuation tools, a fifth integral approach

According to the thinking of Bernard LIETAER and Stefan BRUNNHUBER on the Money evolution through 'development levels' as "evolutionary economic systems" (LIETAER and BRUNNHUBER, 2005a, p. 123–135), *premodern* Money (concomitant with the agricultural revolution of an agrarian society) encompasses commodity-based money with utilitarian value (*alias* 'primitive currency'; *e.g.* cattle, rice, eggs, salt, *etc.*)—to overcome the prerequisite of a double coincidence of desire in unilateral barter—as well as precious metal coinage with the sovereign power to mint coins (LIETAER and BRUNNHUBER, 2005a, p. 125–126).

*Modern* Money (concomitant with the industrial revolution of an industrial society) includes paper-based money—with gold standard<sup>43</sup> as a transition mechanism from precious metal coinage to bills of exchange as private paper receipts—which became not only fiat money (*i.e.* created out of nothing or *ex nihilo* since paper had no intrinsic value unlike the scarcity value of precious metal) but also legal tender (*i.e.* only legal means of debt repayment or tax payment until declared null and void if refused)—by enforcing through coercion the monopoly of simple or composed interest-bearing debt money as scarce money for competitive markets—with the banking power to print banknotes (LIETAER and BRUNNHUBER, 2005a, p. 126–127).

*Postmodern* Money (concomitant with the information revolution of a knowledge society) embraces electronic-based money (with both high-tech smart card application and low-tech paper currency system) as complementary currency—to national currency (made of metallic coins, paper banknotes, central bank digital currency issued by central bank; and payment cheque, electronic money issued by commercial bank)—such as: loyalty point on a loyalty card among store chain alliances (*alias* private commercial currency, loyalty currency; *e.g.* air miles, luncheon voucher, gift voucher, *etc.*); barter credit or barter currency as a clearing house system

games); multi modal research (*alias* mixed methods research; *i.e.* mix of quantitative and/or qualitative methods); transformative research frameworks (*e.g.* participatory research, activist research, feminist research, decolonizing methodologies, community based methodologies, and asset based methodologies).

<sup>&</sup>lt;sup>43</sup> Standard economic unit of account based on a fixed quantity of gold—used as the international monetary system until the end of the Bretton Woods system when the United States of America unilaterally terminated convertibility of USD to gold foreign central banks—which explains why many central banks nonetheless hold substantial gold reserves to give value to the issue of their paper-based money—as it used to be 100% backed by gold coinage or bullion during the gold standard to be fully convertible at any time.



to facilitate countertrade between accounting books of different corporate groups (*alias* complex multilateral barter, commercial barter system, international corporate barter; *e.g.* International Reciprocal Trade Association, National Association of Trade Exchanges, *etc.*); social or community currency with social or environmental purpose aiming at resolving sustainable development issues as for liquidity crisis, local unemployment, elderly care, environmentally friendly behaviour incitation (*alias* emergency currency, temporary barter market currency, mutual trade credit, time-based currency, mutual time credit, local currency backed by national currency, business-to-business exchange currency; *e.g.* stamp scrip, Barter Network or Barter Club, Local Exchange Trading System, Hours, Time Bank, Regional Money, WIR Bank, *etc.*)—by using goods and services inventory as working capital or common tender to perform exchange with abundant money for cooperative markets—with the people power to create and use currencies (LIETAER and BRUNNHUBER, 2005a, p. 127–132).

'Post-postmodern' Money (concomitant with the integral evolution of an integral society) would transcend and include both abundant money for cooperative markets and scarce money for competitive markets (*alias* yin and yang polarities) in a constellation for currency pluralism or polyculture and monetary resiliency or stability (*i.e.* monetary diversity and interconnection) (LIETAER *et al.*, 2009 *apud* LIETAER *et al.*, 2012)—thanks to some interoperability and intercurrency systems (*resp.* integrated currency networks, multiservice currency types).

It is on this basis of this preliminary work of an integral approach to Money evolution—and thanks to my transdisciplinary investigation on the subject as well as the complete findings of my integrative review—that I would like to develop and propose my own explorative work on the categorization (*alias* taxonomy, typology) of the emerging trends and 'development levels' of Money history (*resp. premodern, modern, postmodern*, 'post-postmodern' Money) (*cf.* BROCK, 2009; BLANC, 2011; MARTIGNONI, 2012; LATHROP, 2020)—in order to compose an Historical Atlas and Compendium (HAC) of expressible, measurable, exchangeable wealth valuation tools (PLACE, Forthcoming).

### 8. Implementation Guide and Toolkit for money networking, management, leadership, research, a sixth integral approach

As there will never be any perfect human-made product/system—by accepting humankind imperfection through incarnation as a mark of humility—it is preferable to have multiple imperfect but complementary currency systems choice (polyculture) rather than a single and unique imperfect one imposed by lack of alternative (monoculture).

In addition, each currency design and implementation is different and dependent on the historical, geographical and cultural context of a particular territory or community—with a short and narrow window of opportunity to build a deep and long confidence with the stakeholders. Reason why a guide and toolkit of a monetary architecture or engineering must be contemplated as a highly strategical and complex human-made project and must incorporate all 'four quadrants': money networking as a moneyer (collective–exterior); organizational management as a manager (collective–interior); entrepreneurial leadership as a leader (individual–interior); impact research as a researcher (individual–exterior).

By taking inspiration from previous complementary currency implementation guides (*cf.* LIETAER *et al.*, 2006a; LIETAER and HALLSMITH, 2006b; ROGERS, 2011; BINDEWALD and STEED, 2013; NEF *et al.*, 2015)—as well as the complete findings of my integrative review—I would intend to compose an Implementation Guide and Toolkit (IGT) for money networking, management, leadership, research (PLACE, Forthcoming).



### 9. Integral Impact Assessment Matrix for money, management, leadership, research, a seventh integral approach

Drawing inspiration from existing integral impact assessment framework—*Reinventing Organizations Map* (EMICH and MOLNÁR, 2018) based on *Reinventing Organizations* (LALOUX, 2014) and *MetaImpact/MetaCapital Framework* from the International Integrated Reporting Council (IIRC) (ESBJÖRN-HARGENS, 2020) for instance—I would like to improve my 'impact assessment matrix' (IAM) prototype by not only incorporating the 'four quadrants' as already done previously (PLACE, 2015a apud PLACE, 2018c); but also the 'development levels' of money networking, organizational management, entrepreneurial leadership, and impact research—thanks to the complete findings of my integrative review.

By doing so, I will be required to conceptualize four 'impact assessment matrix' (IAM) for money, management, leadership, research—integrated into an integral Impact Assessment Matrix (PLACE, Forthcoming).

## 10. Virtuous University of VirtoŜanĝo for integral research and education, an eighth integral approach

Nowadays, sustainable development issues seem to be solely focusing on anthropogenic climate change<sup>44</sup> and carbon emission mitigation—sometimes flirting with the dictatorship of uniform thinking and political correctness—to the point of either condemning any energy mix including nuclear or hydrocarbon; or proselytizing degrowth and depopulation with guilt and alienation. Proof of this is the proliferation of all these carbon reporting frameworks<sup>45</sup> which quickly became the benchmark for sustainability impact reporting<sup>46</sup>.

It is certainly undeniable that humankind have reached the peak  $oil^{47}$ —or even the peak of economically viable extraction of any mineral or energy resource (*e.g.* water, wood, biomass, rare-earth element, precious metal, radioactive element, *etc.*)—and that a reduction in the exploitation of these resources per capita and globally is necessary.

But rather than banning per capita consumption/production or reducing the world population with quota schemes—even though the entire economic system is based on the growth paradigm inducing planned obsolescence due to interest-bearing debt money seeking to value everything via speculative markets and tax everything down to the informal economy (PLACE, 2010, p. 69 adapted from JACKSON, 2009, p. 61)—why not trying to encourage simple living or incentivize environmentally friendly behaviour (*alias* eco-friendly consumption) according to the complete social and environmental life cycle assessment of each goods and services—by reconsidering

<sup>&</sup>lt;sup>44</sup> Climate change cause by unnatural human-induced increase of the greenhouse effect—as concentration increase of Greenhouse Gas Emissions (GGE) primarily due to the burning of fossil fuels or hydrocarbons (*i.e.* coal, oil, and natural gas). <sup>45</sup> *E.g.* SCM Stakeholder Capitalism Metrics of IBC International Business Council of WEF World Economic Forum, IFRS International Financial Reporting Standards, ISSB International Sustainability Standards Board, TCFD Task Force on Climate Related Financial Disclosures, TNFD Taskforce on Nature-related Financial Disclosures, SASB Sustainability Accounting Standards Board, CSRD Corporate Sustainability Reporting Directive of EFRAG European Financial Reporting Advisory Group, SFDR Sustainable Finance Disclosure Regulation, DJSI Dow Jones Sustainability Index, CPD Carbon Disclosure Project; *etc.*.

<sup>&</sup>lt;sup>46</sup> *Alias* Environmental, Social, and corporate Governance (ESG); *i.e.* impact assessment framework of an organization's strategy to create enterprise value and objectives by including the identification, assessment and management of sustainability risks and opportunities in respect to all organizational stakeholders (including but not limited to customers, suppliers, employees, and the environment).

<sup>&</sup>lt;sup>47</sup> Moment at which economically viable extraction of petroleum starts to permanently decrease—since it cannot be extracted economically at a given price.



the entire monetary system through interest free complementary currencies to value voluntary work or household tasks?

The undertaking is tough—and to make sustainable development and money creation more virtuous—it is necessary not only to promote all that has just been said in this article; but also to teach all this in an integral way. For this purpose, I have imagined the creation of the Virtuous University of VirtoŜanĝo<sup>48</sup> (VUV) for research and education on integral money, management, leadership, research—through its Virtuous Institute of Research and Technology in (Conomy (VIRTO) (PLACE, Forthcoming).

#### 11. Conclusion

Currency projects could be considered as one of the most complex human-made projects to be designed and implemented (and highly strategical as it involves and depends on entrepreneurial leadership, organizational management, and monetary network considerations) which therefore required a relevant theoretical paradigm and methodological framework to investigate such complex phenomenon—by using various 'labeling' (*e.g.* analytical method or methodological technique) rather than the same one again and again as described above.

A meta-theoretical paradigm with multi-methodological framework seems to me—and other big names on the international complementary currency scene such as Bernard LIETAER, Stefan BRUNNHUBER, and Christian ARNSPERGER—to be the most appropriate to do so (as it was already done in some previous complementary currency research without even knowing it according to my integrative review).

At the very beginning of my quest of impact improvement for the financing and professionalization of complementary currency projects—and after an overview of some literature reviews on currency impact assessment which revealed a research gap—I was led develop a framework and matrix prototype made of 71 indicators which was cited in 6 other works and used to assess 10 complementary currencies.

Having realized that a strict or broad definition of impact would change the way it is assessed, I followed the advice of my thought leaders to re-assess this 10<sup>th</sup> complementary currency with multiple methodologies (ranging from 6 to 8 and extended to 14) rather than those usually expected (*e.g. systems theory*, econometrics)—which revealed its educational impact for monetary reform beyond a purely economic one for localism (*e.g.* local spending or supply chain for carbon mitigation). I have even proposed a more integral definition of Money that influences people's beliefs, behaviours, values, collaborations (*alias* 'four quadrants' of Ken WILBER's Integral Theory).

I also decided to re-review the literature of the leading academic journal of this field which revealed that not one-eighth (12.7%) as previously found in 2013 (PLACE and BINDEWALD, 2013a, p. 7–8 *apud* PLACE and BINDEWALD, 2015b, p. 154) but five-seventh (69.6%) of its articles were actually dealing with currency impact assessment—of which one-third (33.8%) were a positive impact—according to the partial results of this preliminary study of its 102 articles published from 1997 to 2013 (missing yet the 92 remaining until 2021). Although this integrative review confirmed the established fact that most complementary currencies were aiming at sustainable development, it also made the unexpected discovery of an intrinsic

<sup>&</sup>lt;sup>48</sup> Universitas Virtuosus Virtutis in Latin and its motto 'sense of life' [la: vitam sensu], conceived as a 'univers–ity' or 'multivers–ity' or even 'metavers-ity' on 19 November 2008 during the Great Recession under the code name of Vivaltruism and registered as VirtoŜanĝo on 17 January 2017 before the Great Lockdown—and officially launched on 17 March 2017.



multidisciplinary approach as well as a relative integral approach to investigate currency innovation—through a significant use of meta-theoretical paradigms or multi-methodological frameworks without even knowing it through an explicit reference to it.

To promote this integral research and education (*i.e.* integral approach of 'four quadrants' and 'development levels'), I aspire to conceive the following in the foreseeable future: Historical Atlas and Compendium (HAC), Implementation Guide and Toolkit (IGT), Impact Assessment Matrix (IAM), Virtuous University of VirtoŜanĝo (VUV).

It has been a long journey since my discovery of complementary currency in 2009 by encountering Bernard LIETAER<sup>49</sup> and resulting on my master's dissertation (PLACE, 2010, p. 152)—before finalizing my doctoral thesis under the scrutiny of Sean ESBJÖRN-HARGENS's Complex Integral Realism, hopefully (PLACE, Forthcoming).

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<sup>&</sup>lt;sup>49</sup> I got a foot on the ladder of currency innovation since I attended a conference of Bernard Lietaer on complementary currency held at the French Ministry of Economy and Finance on 05 February 2009—while the fledgling Bitcoin network came into existence on 03 January 2009 and was still in its infancy.



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