

The roles of local, complementary and community economies and currencies as sustainable alternatives to the systemic challenge of older adults' care.

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1. Introduction

Older adults and their needs have been marginalized in modern Western societies. Urban planners, architects, property developers and those who design, develop, and market products and services typically target younger adults, especially those at the start of their working lives, who have growing incomes, families and wants. As a result, the framing contexts for older adults, including physical infrastructures and the set of available products and services, are ill-conceived and ill-adapted to their needs. This unnecessarily increases the impact of any loss of function on their possibilities to lead active and independent lives. Older adults can be made prematurely dependent on care. Available care options are also limited, constrained by being embedded in an unsustainable development paradigm dominated by market logics that focus on economic growth and by unsustainable lifestyles that contribute to and reproduce unsustainability. Older adults also tend to be treated as a discrete population segment, not as an integral part of the wider community, which often leads to their segregation and isolation and to further reducing their security and wellbeing.

Yet, with demographic change toward an older age structure through lower birth rates and greater longevity, and with changes to family relationships meaning there will be fewer older adults with children in the coming years, there are good and necessary reasons to suppose that novel, unconventional, niche and still-to-be-developed possibilities for creative new lifestyles, living arrangements and care will emerge, associated also with different patterns of production and consumption. Such creative arrangements are facilitated by mechanisms that promote mutual aid, reciprocity and sharing within and across whole communities. These offer the possibility to address older adults' care and integration through arrangements that simultaneously fulfil the needs of others. Examples of such novel care schemes are shared living and circle of supports, which in several permutations have mushroomed globally.

The central premise of this paper is that reshaping care and consumption also implies reimagining community and contribution, restructuring our use of time and space, and redesigning products and services to create physical and social environments that support active, healthy, and responsible lifestyles and wellbeing on an inclusive and lifelong basis. We argue that the ethos and values of caring are not commensurable with materialism and accumulation or the use of general-purpose currencies: they lie in a different and distinct value realm. We therefore look toward local, complementary and community economies and currencies that can distinguish and support distinct and non-commensurable realms of value, which in turn might support more sustainable ways of caring. The

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paper draws on relevant conceptual and theoretical work and practical experience of local complementary community economy and digital currency schemes, such as Give&TakeCare CIC. It considers the roles such schemes might play in supporting co-designed and co-produced products and services. The paper discusses barriers to full implementation of local complementary economies and ways to address these. Finally, it reflects on the possibilities to create self-reinforcing feedback loops between a new ethos of care and sustainable forms of production and consumption mediated through complementary economy schemes. Following the present introduction (Section 1), the paper addresses the ageing and care crisis (Section 2), the opportunity (Section 3), taking up the opportunity (Section 4) and a conclusion that sketches out an associated research agenda (Section 5).

2. The crisis: ageing and care

Just in England in 2015/16, 75% of the requests for social care support to the local authority were from older people (Full Fact, 2017)³. Longer life expectancy, co-morbidity and changes to family structure bring us to consider how the needs of the ageing population will be fulfilled. Kingston et al. (2018)⁴ state the next two decades there will be a further increase in demands for social care among the ageing population requiring a varying degree of intervention to support individuals with high, medium, and low levels of dependence.

Independent living and quality of life, although often equalled to the ability to toileting, dressing and feeding oneself, are life course goals that are fundamentally broaden and extend to services and eco-systems necessary to maintain dignity and happiness in life. Whilst inclusive approaches for the design of products and services are growing, we remain a society focused on targeting those who are in employment age, marginally and haphazardly realising the benefits that older adults can contribute to society such as experienced and flexible labour, support and mentoring to younger adults and families, not to mention the expendable income that is available among some older adults who have concluded their financial obligations of mortgages and family upbringing.

It is undeniable that older adults represent the group which has the highest demand of social and care services. However, one of the shortcomings of the UK social care model, leading to ongoing debate and negative characterisation of the older adult population as a drain to public resources, is that vulnerability is attributed to specific age groups rather than across the life course (Spinelli et al., 2019).⁵ Loneliness is for example a vulnerability that affects people throughout the life course with highest prevalence in the young adults' population (Office of National Statistics, 2018);⁶ Victor et al., 2018).⁷

³ Full Fact (2017). Adult Social Care in England. Available online at: <https://fullfact.org/health/adult-social-care-england/>

⁴ Kingston, A., Robinson, L., Booth, H., Knapp, M., and Jagger, C. (2018). For the MODEM project: projections of multi-morbidity in the older population in England to 2035: estimates from the Population Ageing and Care Simulation (PACSim) model. *Age Ageing*, 47, 374–380.

⁵ Spinelli G., Weaver P., Marks M. and Victor C. (2019) Making a Case for Creating Living Labs for Ageing in Place: enabling socially innovative models for experimentation and complementary economies. *Frontiers in Sociology*. <https://www.frontiersin.org/articles/10.3389/fsoc.2019.00019/full>

⁶ <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/lonelinesswhatcharacteristicsandcircumstancesareassociatedwithfeelinglonely/2018-04-10>

⁷ Available at: https://whatworkswellbeing.org/wp/wpcontent/uploads/woocommerce_uploads/2018/10/Full-report-Tackling-loneliness-Oct-2018.pdf.

The recent pandemic has sharply brought into focus how we are ill prepared to fulfil the basic needs of food and health care delivery for vulnerable members of communities and that such critical situations have been met through local and self-organising efforts each community and neighbourhood has created. Local networks of kindness have been the only viable response to logistic and social needs, the latter being often invisible, caused by social distancing and consequent isolation.

Models of care for those who are in later life has not changed much over the years. There are fundamentally five ways older adults can access care: professional paid care, family care, residential care, government funded home care and unpaid care by volunteers coordinated by not-for-profit organisations. These ways of caring are often simultaneous with individuals receiving support in more than one way. With cuts to social care funds (Office of National Statistics, 2016b)⁸ individuals are left to consider and plan for their own care. Planning for later life is well known to be difficult for several reasons. Firstly, it is hard to predict what needs may emerge in later life, and planning for worst scenarios is psychologically unpleasant. In addition, the cradle to grave model, which historically underpinned the welfare provision in the UK and other European countries, has not been publicly debunked by political parties for fear of losing voters' support, leading to the upholding of a mythical system of care that is clearly under-resourced and unable to cope.

Alternative caring models have been hard to come by and experimentations can be grouped in three main categories:

- i. Co-living, individually funded initiatives of older adults choosing to live in independent but adjacent units for mutual support and to pool together resources for the upkeep of the properties.
- ii. Smart living, residential properties enhanced by the deployment of technology for the detection and alert of accidents and for remote monitoring of health and lifestyle.
- iii. Ageing in Place, models of care delivered in private homes through professional paid and voluntary/free resources.⁹

The integration of different health and care models, the importance of community and individuals and the contribution that service users can make to the codesign of health and care services, are three key points that the Care Quality Commission has introduced in their latest strategy document (CQC, 2021).¹⁰ Personalisation and integration of care services assume a contextual and local knowledge of the needs of individuals, the social network they can count on, their financial circumstances, and the existence and availability of community-based services.

The challenges posed by local experimentation, such as Ageing in Place models, where a meaningful part of the delivery of the services relies on the contribution of volunteers are:

⁸Available at: <https://www.ons.gov.uk/economy/nationalaccounts/satelliteaccounts/compendium/householdsatelliteaccounts/2005to2014/chapter3homeproducedadultcareservices>

⁹ Ageing in Place models are usually organised by non-for-profit organisations, and in a few forward-looking cases they are integrated services with a multidisciplinary network of competences that support vulnerable adults (C.F. Compassionate neighbourhoods <https://compassionateneighbours.org/>).

¹⁰ https://www.cqc.org.uk/sites/default/files/20200111_cqcconsultation_doc_new_strategy2021.pdf

- i. *Longevity*: local schemes are difficult to sustain. Their delivery relies on the coordination, management and support of volunteers provided by Not-for-Profit organisations, which, in turn rely on time-limited government grants.
- ii. *Competition*: despite the UK being a nation where volunteering is popular (McGarvey et al, 2019)¹¹, there are many organisations relying on volunteers and competing to retain the same volunteers. Growing the base of such social capital is a struggle.
- iii. *Scaling up*: services developed as local solutions are the results of in-depth knowledge of the area and of its stakeholders. This requires time and the knowledge developed locally cannot be scaled up or applied everywhere without similar efforts of relationship building.
- iv. *Flexibility*: being resourced by volunteers in their free time, many community care services can lack flexibility. Service continuity is also an issue as volunteers' circumstances change and individual volunteers may no longer be able to support other community members.

3. The opportunity

Flexible and consistent care in one's home are characteristic of a care system that is much preferred by older adults. The provision and the quality of community-based care services relies on people-centred approaches, which require understanding and empathy of personal circumstances, significant skills in matching resources, ability to provide meaningful motivation, and incentives to those who volunteer. Breaking away from the social stigma that charitable schemes perpetuate is also an important element of successful community-based care services. The fundamental portraying of ageing people as "people in need" and in many way "resourceless" is unattractive for all stakeholders of care-in-place services.

Models of care have also been limited in considering consequences and impact on sustainable production and consumption and despite the growing attention to the ecological agenda, caring for the elders, a sector that attracts 25% of the total social care budget¹² is yet to consider how care can be made compatible with a triple bottom line framework. Some of the key considerations that contribute to poor quality and unsustainable care are:

- i. Minimum wage: attracts unqualified staff who are problematic unless they are trained by the recruiting agencies/establishment that deploy them in residential and home care.
- ii. Low salaried workforce is often required in more affluent geographical areas where paid care is afforded. This has an impact on transport and fuel consumption.
- iii. A high turnover of staff means low service consistency for the person who needs care.
- iv. Volunteering workforce are traditionally managed by NGOs who, as consequence to the continuous cut in funding, are resorting to offer paid care service themselves as income stream.
- v. Current home social care provided by NGOs consists almost always of one-to-one relationships. This is a fragile lifeline for those who are in need of care and, also, is limiting as it does not allow the creation of networks of support and socialisation beyond the opportunity provided by the one-to-one home visit.
- vi. Due to council cuts and limited personal financial resources, volunteers are often the only contact in case of emergency and critical situations. Whilst it is beneficial that there is a safety

¹¹ Available at: <https://www.ncvo.org.uk/policy-and-research/volunteering-policy/research/time-well-spent>

¹² <https://www.kingsfund.org.uk/publications/social-care-360/expenditure>

net in the form of volunteers, they are untrained and often unsure about how to invoke relevant services, which are at times unresponsive due to overload.

- vii. Evaluation of caring in community schemes are limited and limiting. They consider indicators such as the number of referrals accepted, the hours of visits delivered, and the number of volunteers mobilised. All these are necessary measures to assess a caring scheme, but they are myopic and often subservient to the plan of securing more funds for much of the same. Indicators that capture wider ecosystem attributes should be considered that align to the wellbeing of individuals, communities, economies, and ecologies.

Extending the considerations of how dismissive current care models are of sustainability issues, the literature reporting community care case studies discusses, among many limitations, the very high resource intensity and inefficiency involved, for example, in the logistics of providing multiple daily visits to individual homes by (among others) professional carers (each visit of often only very short duration such that the carer spends more time getting to and from clients than with clients), chiropodists, hairdressers and other providers of personal services, catering services (e.g. meals-on-wheels) as well as cleaning, laundering, ironing and other domestic services. In addition, many elderly people continue to live on in homes they moved into many years earlier, which are often too large and are ill-suited to their later life needs, which makes poor use of available housing stock and incurs high energy costs for space conditioning. Their continuing life there often depends on acquiring specialised equipment for adapting spaces (such as installation of stair lifts to enable access to upstairs bathrooms and bedrooms) as well as a succession of material living aids that, typically, are supplied new in each case, but usually have very low service lifetime and use intensity as they typically serve a single owner whose need and capacities often change rapidly, rendering even recently acquired equipment quickly redundant despite still being perfectly serviceable (only in respect of a service that the elderly person is no longer able to benefit from).

4. Realising the opportunity: from community care to an integrated model of lifelong wellbeing

Building on our practical experience of trying to implement novel models of community care in the context of a large Innovate-UK project (Spinelli 2017)¹³ as well as on our research involving alternative transaction models (Weaver et al., 2021)¹⁴, we have learned first-hand that interventions targeting single population segments are pre-ordained to fail. Our experience tells us that solutions to the challenges of ageing need to be developed through a whole life and a whole community perspective that is not focused only on a specific subgroup of community during a specific phase of the life course, but rather on the whole community and on the whole life course. An important element of a change in framing is also that ageing is not seen as an issue in isolation, but rather as one of many interlinked issues facing communities and neighbourhoods. Perceiving and addressing issues in isolation limits

¹³ Spinelli G. (2017) An altruistic approach at the time of austerity: the case of Give&TakeCare as a community-led model to contribute to the solution of the older adult social care crisis. Institute of Place Management 4th International Biennial Conference, Manchester UK

¹⁴ Weaver, P. M., Marks, M. B., Skropke, C., Hogan, L. M. and Spinelli, G. (2021) Sustaining and Growing Social Innovations Using Integrated Development Models: Experiences for the USA, the UK and Japan. Chapter 5, pp 96-132 In: Briar-Lawson, K., Miesing, P. & Ramos B. M. [Eds.] Social Entrepreneurship and Enterprises in Economic and Social Development, Oxford University Press, New York, pp388

the scope for finding solutions, whereas a broader, multi-issue framing offers scope to find solutions that build on complementarities and synergies in the ways responses to issues are developed.

Another key point of departure is to switch from seeing older people as only having 'needs', which positions them as being a drain and a cost on community and seeing them rather as everyone else: people able to make positive contributions to community, people with something to offer. The more promising framing, then, is one that values everyone in community equally, recognising that over the life course everyone will travel from childhood to older age and, at each stage in life, everyone both has needs and can make contributions. What is important is that the nature of needs and contributions changes across the life course and this creates scope for making use of the complementarities that exist between people of different ages and experiences, such that older people can help address the needs of younger people through the contributions they can make, for example in passing on skills and life lessons, just as younger people can help address the needs of older people, which in turn gives scope for matchmaking and solutions that bring mutual benefits.

When seen in isolation, issues, such as ageing and care, are difficult to address other than through approaches that are both unsatisfying for the concerned individuals and entail high and unaffordable financial and material costs, whereas in a broader and longer-term perspective that considers ageing alongside other issues facing community, there is scope to develop novel solutions through systemic approaches that address multiple issues simultaneously based largely on using assets and resources already available locally within community that are now under-deployed or unrecognised. Issues concerned with lifelong health and wellbeing, local quality of place, socio-economic equity and inclusion, and socio-ecological resilience, for example, are all better addressed in association with issues of ageing and care, and all of these can be advanced together through creative multi-objective approaches to local and community re-invigoration along more sustainable lines. Important here is to replace one-dimensional approaches to ageing and care with multi-dimensional systemic solutions to broader issues of inclusive lifelong wellbeing in strong, resilient, diverse, and sustainable communities and places.

This is most easily seen by recognising that ageing is problematic now not because this is inevitable but because communities and neighbourhoods are no longer effective in providing either the opportunities to develop multigenerational networks of support that people need as they age and begin to lose functionality or an enabling physical context that supports continuity in living, operating and contributing to community and in contributing to own and others' wellbeing even with impaired functionality.

What currently are perceived as 'problems' of ageing are more properly seen as symptoms of long-term systemic failures in community building and physical planning. They are symptoms, also, of other failings, such as failures of inclusive design of products and services, but failures in community building, physical planning are by far the most significant. Together these translate into failures of lifestyle and living arrangements arising from a predominantly material orientation of society and the optimisation of products and services at the scale of individual or household provision. Care in community is more easily achieved and loneliness and sense of purposelessness are less likely to be issues when people are part of strong, multigenerational social networks. The consequence of not having strong social networks manifest most obviously in old age, but corrective interventions are, by then, largely too late to be effective. The creation of strong, multigeneration social networks is best

played out through life-long engagement in multigenerational social and community activities that involve routinising reciprocity and mutuality, that practice giving, taking, and sharing, and that stress collective over individual values. For this, time, space, opportunities, and incentives must be made available for active and responsible citizenship throughout the life course.

Equally, the physical forms of our neighbourhoods, the siting of service centres such as hospitals and the design of buildings have all been optimised on models that separate land uses, concentrate services, and provide for and rely on motorised access, especially by individually owned and operated cars. These physical arrangements severely restrict the inclusion and participation options of older people in everyday activities as well as their access to essential services, forcing many elderly people to enter residential care prematurely, where their isolation from the rest of community and sense of worthlessness are made complete and permanent. Significant, here, has been the loss of flexible, multifunctional, open, and serviced public space and the loss of easily accessible multifunctional neighbourhood community centres that – in the context of the growing numbers of aged citizens – could operate in part as local day centres for socialising and as venues for socially and economically productive multigenerational interaction with other members of community in the context of a wider set of co-produced activities and services.

Important here, also, is to recognise that received models of the life course are often still influential even though these are outdated. Especially, the three-phases life course model of ‘education-work-retirement’ is especially unhelpful when thinking about the productive roles people can play across their life course, including in periods of life that this model does not even recognise. There are many who are unable to obtain formal employment or who are recently retired but, in both cases, are fit and healthy and have free time available they can devote to activities that could well include elements of care and, also, many other contributions to community. Increases in average life expectancy as well as personal and policy ambitions for people to enjoy longer, healthier and more active lifestyles and for communities to close growing gaps in longevity, health and healthy years of life across social and income divides mean that the three-phase model is inappropriate as a framework for the needed reconceptualization and restructuring of how time is used across the life course and how different contributions individuals might make to their own and others’ wellbeing and security might be organised.

a) Guiding themes for developing systemic solutions

Elsewhere (Spinelli et al, 2019), we have consolidated these insights into a set of guiding themes for designing and implementing systemic solutions to the multiple challenges that communities face, of which ageing is important in its own right because of its scale and the evident current lack of effective approaches, but it is important also as a potential point of entry in designing and implementing more holistic, integrated, and coherent approaches. These guiding themes include:

- i. *New models of value and value creation*: There is a need to apply new models of value that recognise and legitimate undervalued assets and resources within neighbourhoods, organisations, and individuals, empowering those who own them to access different means of social and economic participation.
- ii. *Open innovation networks*: There is a need for innovation by networks of partners – all of whom are stakeholders in neighbourhoods and communities – aiming at creating value through agile collaboration, including through participation in activities unrelated to core areas of business and, in so doing, collectively creating multiple streams of value.

- iii. *Co-production*: There is a need for asset-based approaches to co-production and co-creation within social service programmes that recognise and reward contributions and alter the notion of work within programmes and communities. By intentionally involving participants in activities where they can contribute and use their assets and be recognised and rewarded for their contributions, participants feel socially included, valued, and accomplished. This also changes the role of strategic partners – especially statutory service providers – bringing them and their assets into the needed open innovation networks.
- iv. *Reciprocity*: A central premise, alongside the already identified need for a flexible and inclusive approach to asset identification and deployment, is the need for all individual and organisational contributors to receive benefits as they co-create, as this creates a virtuous cycle attracting new partners and participants and widening access to more resources.
- v. *Experimentation*: There is a need for an approach that reduces the gap between innovation and implementation by adopting a co-creation and co-delivery model of experimentation enabling stakeholders to design, deliver, evaluate, and adjust their novel solutions through learning by doing: i.e., an approach that sees innovation as experimentation and that therefore integrates data collection, monitoring and evaluation into projects and activities in real time.
- vi. *Local stakeholder control and governance*: There is a need for local stakeholders to set goals that reflect local contexts, priorities, and interests and to be responsible for governance of experiments, initiatives and the data and information generated as part of monitoring and control.

The Value Constellation Model (Normann & Ramirez 1993)¹⁵ offers a framework able to foster and maintain environments of non-linear relationships where partnerships in the form of co-design, co-production and co-creation underpin the sustainability of value propositions. Equally, the Living Lab framework offers an approach for all stakeholders in communities to be involved in innovation from the start and to co-produce experiments in real time and in evolving contextual settings (Galli 2010¹⁶; Almirall and Wareham 2008).¹⁷ We have concluded elsewhere (Spinelli et al., 2019) that the combination of Living Lab methodology and non-linear models of value creation may represent theoretical foundations for innovative models for ageing, as these cope with the uncertainty of a changing context and with the necessity to identify alternative and supplementary value-adding assets. Recognising the diversity of value-adding assets and resources also enables straightforward reciprocal exchange to be replaced by more complex and inclusive groups of active citizens engaged in wider and more diverse sets of value-adding activities, exploiting the notion that diverse talents can all contribute to social sustainability in exchanges that may require further coordination but are more encompassing. Effectively, sustainable solutions to ageing are more likely to emerge in the context of

¹⁵ Normann, R. & Ramirez, R. (1993) From value chain to value constellation: designing interactive strategy. Harvard Business Review, Jul-Aug 1993; 71(4): 65-77.

¹⁶ Galli, L. (2010). In Memoriam: William Mitchell. Available online at: <http://www.lgalli.it/in-memoriam-william-mitchell> (accessed October 24, 2018).

¹⁷ Almirall, M., and Wareham, J. (2008). Living Labs and open innovation: roles and applicability. Electron. J. Virtual Organ. Netw. 10, 21–46. Available online at: <http://www.esadeknowledge.com/view/living-labs-andopen-innovation-roles-and-applicability-151918> (accessed March 20, 2019).

multi-project, multi-objective, multi-activity settings involving multiple stakeholders in community working as partners to co-design and test novel solutions.

These guiding themes offer scope to develop more holistic, integrated, and coherent approaches to challenges facing communities based on enabling and living healthier and more sustainable lifestyles, which place value on personal development and wellbeing, on inter-human and human-nature relationships, and on local quality of place and opportunity. These values are not ones the mainstream economic system recognises. It is therefore unlikely that solutions can be developed within the context and logics of the mainstream economy, which is why we focus attention on the roles that complementary community economies might play, not only in addressing issues of ageing, but in addressing other community challenges as well and, in the process building local neighbourhood and community resilience bottom-up by refocusing on the local.

b) Complementary community economies

We therefore propose an alternative to mainstream approaches for local and community development. Our vision is to achieve more inclusive, sustainable, and resilient development through economic and monetary plurality.

Using only conventional currency means adopting the narrow economic logic of efficiency and being dependent on the mainstream economy over which local actors have no control. We believe that a mosaic of complementary local community economies developed from bottom-up is needed, operating in parallel with the existing economy and creating opportunities to develop and mobilise values and assets locally through coproduction. Each community economy would use a geographically and functionally limited currency (in Polanyi's terminology – special purpose money) to establish Complementary Currency Systems (CCS). These would be implemented as digital programmable currencies supported by local blockchain platforms, which offer low (near zero) economic and environmental transaction costs, high verification and security benefits, and possibilities to define allowable transactions and to collect data to support real-time economy governance. Recognising the need for multi-dimensional, multi-sector, multi-activity, community-wide approaches as well as for mechanisms to coordinate and sustain these, we are drawn to the role programmable CCS might play in community and local development if the CCS is owned and governed by local stakeholders and if governance is backed by appropriate data harvesting and analytics support.

The financial crisis of 2007-08 demonstrated the risks in over-reliance on the mainstream economy and money. The accelerating global environmental crisis, linked to patterns of production and consumption and economic growth, shows that the mainstream economic, financial, and monetary systems are also unsustainable ecologically. Furthermore, inequalities, both social and spatial, are growing. Many people and places are becoming progressively marginalised, neglected, and excluded in terms of investment, opportunity, and voice. This disconnect has translated into an erosion of trust in once-bedrock institutions of society – representative democracy, mainstream money and economy, and the welfare state – especially in the context of austerity. There is a growing sense of hopelessness among those feeling left behind, let down and forgotten, which brings risks of discontent and extremism.

Increasingly, communities are challenged by local-level manifestations of so-called “grand societal challenges” and “wicked” problems whose roots lie in these mainstream systems. Solutions are not

available “off-the-shelf” and it is improbable that they can be found within the same logics that create the problems. Policies for local economic and community development follow market logics, seeking to improve local efficiency and competitiveness as ways for localities to participate in the accepted economic systems. However, these efforts fail to recognise opportunities for economic, social, and environmental production, employment, skilling, justice, and inclusion or to capture cost saving that lie in distinguishing different realms of value. Little emphasis is placed on developing local systems, such as complementary community economies that operate on logics different from those of mainstream markets. Most local development effort and supporting research focuses on improving competitiveness under prevailing efficiency logics, not on developing complementary and holistic local community economies to create greater local self-sufficiency, own opportunities, and safeguards against global market exclusion and instability.

The COVID situation, unemployment created by it, unemployment that will come additionally from technology change now underway, demographic changes leading to more diverse populations, as well as medical and natural ageing – our entry point to the current discussion – all add weight to the argument for developing complementary community economies at local scale. These issues imply a need for new approaches to social and economic inclusion that turn diversity into an asset by capturing benefits in complementarities between different needs of individual- and organisational-actors and the different contributions they can make. They also imply a need to re-organise how individuals use time, and for society to redefine productive use of time. Stimulating healthier, active, responsible, and more sustainable behaviours, practices and lifestyles will be more possible when parallel economies exist operating on different logics and offering citizens options to spend varying time fractions in the market and community economies and to shift this balance dynamically across the life course as personal situation and contextual conditions change.

c) Complementary Currency Systems (CCS) and sustainability

CCS are units and systems of account developed and used by networks of individuals and organisations to record and regulate exchanges of goods and services. They enable the creation of economies that, by operating on logics different from the mainstream economy, recognise values that support multidimensional – integrated – local development and delivery models as opposed to models focused only on economic productivity that rule out activities, resources, and values that the mainstream economy does not recognise. CCS are diverse in terms of their underlying concepts, forms, specific objectives, modes of monetary governance, degree of articulation to central political and economic institutions, and contextual settings. Nevertheless, broad shared objectives of CCS initiatives are to support the socio-economic and political development of territories, establish economic practices based on standards other than economic efficiency (e.g., ethical, environmental and solidarity values), and promote empowerment. CCS offer a mechanism for implementing the principle of subsidiarity, giving local people and organisations more control over matters that affect daily lived experience in neighbourhoods and communities.

An important consideration – which links directly to the sustainability agenda – is that many important top-down policy strategies for more sustainable development – such as transition to circular and resource-efficient economies, climate change mitigation and adaptation, as well as efforts to protect and enhance habitats and biodiversity – are most logically organised at the local level around short and closed value chains, using high inputs of locally- and renewably- sourced resources, including local labour. They call for new ‘hybrid’ conceptualisations of roles for citizens as ‘coproducers’ and

‘prosumers’ and for new ways to value, recognise and reward positive contributions and responsible citizenship beyond the ‘paid-unpaid’ dichotomy of the mainstream economy.

In our perspective, mainstream money and economy are powerful ‘actants’, producing and reproducing unsustainable development pathways. Exclusive use of mainstream money makes people and places wholly dependent on the mainstream economy over which they have no control or influence and locks them into a one-dimensional efficiency logic that reinforces neglect and decline of already marginalised people and resources. We therefore look for opportunities that lie in developing CCS economies on alternative logics as ecosystems and incubators of new socio-economic arrangements.

The number of CCS initiatives around the world has grown rapidly in recent years, especially since the financial crisis, but they – and their potential - remain under- studied and under- developed despite advances in enabling digital technologies and their evident promise in addressing major economic, social, environmental, and political challenges concerning markets, money, price-setting mechanisms, values, and economic governance. CCS are not recognised under the normative and theoretical conceptions of money held by economists concerning money issuance, legal status, and substitutability, largely preventing monetary theories from addressing and legitimising them. They are also considered by monetary system specialists to be marginal and ephemeral phenomena compared with the scope, scale and reach of regular money. CCS are therefore under- theorised.

5. Concluding remarks: toward a research programme

Against this backdrop, research is needed to address three related challenges: i) to develop a theory of CCS design and governance for bottom-up, community-led, integrated and inclusive local development; ii) to support local communities wanting to deploy digital CCS to build, operate and sustain complementary economies oriented toward meeting their own territorial and community development priorities; and iii) to explore the role of economic and monetary plurality in realising more inclusive and sustainable development pathways and promoting novel and systemic approaches to community challenges – including challenges of ageing and of moving toward more sustainable patterns of production and consumption – through social innovation.

Building CCS theory is an interdisciplinary and transdisciplinary venture. It requires the combination of multiple skills and perspectives drawn from very disparate disciplines, as well as a willingness to challenge received disciplinary premises. It also requires a combination of inductive and deductive approaches and empirical work that draws on existing initiatives, but also on new experiments. Experiments rely on expanding a methodological toolbox for research and practice on community and territory development and governance, and on conducting longitudinal studies over a period long-enough for behavioural changes and impacts to emerge and to be analysed. The creation of ‘living laboratory’ style experiments, co-produced with stakeholders, including public sector policy makers is at the core of this agenda. Importantly, one aspect of establishing complementary economies as living laboratories is that this offers a methodology and creates arenas for purposeful and systematic exploration of determinants of pro-environmental behaviours and practices.

Some key RQs are:

- What contributions can CCS make to new concepts of work, employment, earning, money, and productivity, new patterns of time use, and new models of local self-sufficiency in basic

goods and services, co-production of statutory services, socio-economic stability, socio-ecological resilience, political empowerment, and inclusion?

- Through local economies and short supply chains for the delivery of foundational goods and services, can we be better prepared in future scenarios of public health and environmental emergencies?
- How can we design CCS to enhance engagement, coproduction, and governance and complementary economies?
- How might values not now recognised in economic accounting be captured and considered in the cost/benefit calculations of participating anchor organisations?
- What are the relationship dynamics between CCS, local culture, and senses of identity, belonging, responsibility, pride in place and community, and (dis)content?
- How might local CCS economies interact and interface with each other and the mainstream economy?
- How might CCS re-shape both dominant institutions and relationships between micro-level and macro-level institutions, organisations, and actors?
- What tools and methods can support CCS practice and research and empower communities?
- Where are the key interfaces between ageing well in community and moving toward more sustainable patterns of production and consumption at individual and community levels?

We consider the challenge of social care as part of a broader research agenda on integrated development of community and place, achieved through CCSs. They provide the digital platform, a new programmable accounting system for values that are currently left aside, and the intelligence necessary to co-create healthy, sustainable, and fulfilling lifestyles with security in old age in the context of stronger, more self-sufficient, and more resilient communities.