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Entrepreneurship as re-sourcing: Towards a new image of entrepreneurship in a time of financial, economic and socio-spatial crisis¹

Steffen Korsgaard

Department of Business Administration, Aarhus University

stk@badm.au.dk

Alistair Anderson

Center for Entrepreneurship, Robert Gordon University, Aberdeen

Johan Gaddefors

Department of Economics, Swedish University of Agricultural Sciences, Uppsala

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Abstract

Purpose – The purpose of this paper is to develop an understanding of entrepreneurship that can help researchers, policy makers and practitioners develop entrepreneurial responses to our current economic, environmental, and socio-spatial crisis.

Design/methodology/approach – The paper adopts a conceptual approach. Hudson’s diagnosis of the current patterns of production is applied to the two dominant streams of theorizing on entrepreneurship: the opportunistic discovery view and the resourcefulness view of e.g. effectuation.

Findings – The analysis indicates that the opportunistic discovery view and to some extent the resourcefulness view are both inadequate as conceptual platforms for entrepreneurial responses to the economic, environmental, and socio-spatial crisis. Instead, an alternative perspective on entrepreneurship is developed: Entrepreneurship as re-sourcing. The perspective emphasizes the importance of building regional level resilience through entrepreneurial activity that sources resources from new places, and uses these resources to create multiple forms of value.

Practical implications – The paper draws attention to dysfunctions in the current theorizing on entrepreneurship in light of the economic, environmental, and socio-spatial crisis. Instead, we offer an alternative. In doing so, the paper also points to the difficult trade-offs that exist between e.g. long term resilience and short term competitiveness and growth on a regional as well as firm level.

Originality/value – This paper adds to research by offering an alternative view of entrepreneurship grounded – not in economics – but in economic geography, thus highlighting the importance of productions’ grounding in material reality and the importance of addressing non-economic concerns in our way thinking about entrepreneurship.

Keywords: Entrepreneurship, economic crisis, environmental crisis, resilience, discovery view, resourcefulness, resources

Article type: Conceptual paper

1. Introduction

The purpose of this paper is to review and reflect on how we conceptualise entrepreneurship in light of the current economic, environmental and socio-spatial crisis. We argue that a narrow “economic” perspective of resource consumption has become established but fails to appreciate how entrepreneurship need not be opportunistically focused on consuming assets. Environmental

degradation is simply treated as a market failure. Moreover, the increasing number of environmentally relevant market failures has led to the under valuation of natural resources and to unsustainable exploitation (Harbi *et al.*, 2010). Yet, as Dean and McMullen (2007: 54) point out “the market failure perspective on entrepreneurship suggests that environmental problems result, not from humans’ natural tendency to abuse the environment, but from an inadequate conception of entrepreneurship”. Our conceptual starting point is that entrepreneurship can no longer be understood as “without regard to the resources currently controlled” (cf. Stevenson and Jarillo, 1990, p. 23). The current situation requires us to recognise that resources, especially our natural resources, are finite. Entrepreneurship has long been seen as a positive force for renewal, but the current financial and environmental crisis has brought to light weaknesses in our current thinking. The great entrepreneurship promise (Anderson *et al.*, 2012), as currently portrayed, fails to resolve our sustainable development needs.

In this paper the promise of entrepreneurship is revisited in an attempt to extend how we as a field of research think about entrepreneurship and to demonstrate how the promise of prosperity with sustainability can be renewed. The ambition is to align entrepreneurship theorising with the needs for more environmental and social resilience by redirecting our entrepreneurial thinking away from opportunistic resource consumption metaphors, and from the idea of creative destruction to creative renewal.

The research questions of this paper lie in exploring how the way entrepreneurship is described within the research field connects to issues of economic, environmental, and socio-spatial development. We talk of opportunities, and describe how they must be seized and exploited. Moreover such opportunistic behaviour is geared to produce competitive advantage, to win some

battle by bettering our competitors, but without regard to what is irretrievably consumed in the process. Of course, there is some recognition that entrepreneurship can address social or environmental problems. But we tend to marginalise this aspect, this type of entrepreneurship, as some sort of alternative entrepreneurship; as ecopreneurship (Linnanen, 2002) or social enterprise (Diochon and Anderson, 2011). However, by marginalising these issues, the social and environmental consequences of all forms of entrepreneurship are not brought to the forefront. Integration into mainstream understandings of entrepreneurship is needed, and this requires a fundamental challenge of the dominant conceptions of entrepreneurship so that mainstream entrepreneurship theorising encompasses and informs sustainable practices.

This gap between mainstream entrepreneurship theory and marginalised environmentally and socially informed research has become all too apparent as crisis became the order of the day (Rae, 2010). The environmental crisis has been topping agendas for some time; the 2008-2009 economic crisis is still making its impact felt across the globe; and the socio-spatial inequalities at regional (e.g. urban centers versus rural peripheries) and international (northern versus southern hemisphere) levels are increasing with tensions and conflict in its wake.

Recently, Munir (2011) noted the conspicuous silence of organizational and institutional scholars on the topic of the economic crisis. In many ways this conspicuous silence is also loudly present in the entrepreneurship research field. Amongst the reasons for the silence, Munir (2011) noted that organizational and institutional scholars have come too close to their subjects, becoming cheerleaders for big business, continually seeking out new ways for firms to make profits. This is certainly the case in entrepreneurship research (see also Rae, 2010). With the exception of emerging oppositional forces (see e.g. Hjorth, 2005; Steyaert and Katz, 2004) it is a generally accepted credo

that the role of entrepreneurship research is to facilitate entrepreneurship and growth, and to persuade entrepreneurs to grow their business as fast and big as possible. This is in spite of evidence that most firms are small and choose to remain small (Anderson and Ullah, 2014). This has been supported by images of the entrepreneur as profit-seeking, risk taking and opportunistic (Anderson and Warren, 2011).

One vivid example of this imagery lies in the reporting and theorising about China's richest woman. Ms Zhang Yin founded the Nine Dragons paper company to collect waste paper. Quite naturally, the popular press emphasises her "rags to riches" story; from start up in Hong Kong, by 2011 the company had a turnover of \$3.8 billion and employed 17,000 people. It is explained that by collecting American waste paper she has become the richest woman in China. Laudable as this wealth creation is, the reports fail to explain how her business upcycles waste paper. From American trash it becomes new Chinese packaging material. In the academic journals, Yu (2012) explores this theoretically, but he emphasises international co-ordination. Nothing is said in the popular or academic press about the transformation of waste to resource, no one even comments on how land fill is avoided or how empty containers returning to China and are usefully re-used. The focus is on economic outcomes such as wealth and jobs, but not on the process of upcycling. This is all too typical of how we understand entrepreneurship.

The triple crunch of the economic, environmental and socio-spatial crisis highlights a strange paradox, which may be a further reason for the abovementioned silence of entrepreneurship researchers. Intriguingly, the response to challenges and crises given by policy-makers and researchers alike almost invariably includes entrepreneurship (see e.g. OECD, 2006, 2010). Yet, has the opportunistic behavior of entrepreneurial bankers and manufacturers not been a major

contributor to the creation of the economic crisis? Moreover, much entrepreneurship research is overly concerned with economic outcomes and ignores processes (Anderson, Forthcoming). However, we also note how entrepreneurship research has recently become much more aware of the importance of context (Hindle, 2010; Korsgaard *et al.*, Forthcoming; Welter, 2011) and the social relationships that are themselves contextualised (McKeever *et al.*, Forthcoming; McKeever *et al.*, In Press). In practice, it appears that many entrepreneurs are deeply embedded in their local environment (Müller and Korsgaard, 2014). They are both constrained and enabled by the nature of their embedding, most often by the social capital of mutuality. Social capital and its operation links and ties entrepreneurs to their context (Anderson and Jack, 2002) so that the local value systems of what is deemed to be important may coax, coerce and cajole entrepreneurs into behaving according to “social” rules (Anderson and Smith, 2007). Nonetheless, the apparent lack of concern about a general moral framework that discourages overly “opportunistic” entrepreneurial behaviour serves to discourage many from taking up entrepreneurship (Dodd *et al.*, 2013). Moreover, this context linking element in social capital is not always productive for entrepreneurship. Light and Dana (2013) show how in some specific context social capital works against enterprise, it “squashes” entrepreneurship. This is because prevailing values may protect the mediocre.

Arguably, the crash of the housing market was at least partially driven by risk-taking corporate entrepreneurs seeking short term profits (Harvey, 2011). Profit seeking entrepreneurs benefit – at least in the short run – from the externalisation of the environmental costs of certain patterns of production and distribution (Hudson, 2001; IPCC., 2007). And the depletion of certain peripheral areas is driven by a logic of opportunistic adaptation to globalised flows of capital to urban centres of economic activity (Harvey, 2011; Hudson, 2001). Indeed, is *opportunistic* entrepreneurship not at the core of the capitalist system producing the triple crunch of crisis?

Whilst the dominant opportunistic view of entrepreneurship is grounded in an Austrian economic view focusing only on the role of the entrepreneur in the market, this paper starts from an alternative view, which integrates economic, environmental and spatial dimensions, in the form of Hudson's neo-marxist analysis of current patterns of production. Hudson's (2005) analysis suggest that the near impossible task of creating sustainable economic development depends on a radical re-appraisal of concepts such as the economy, productivity and development. Hudson (2010) argues for lighter environmental footprints of production, more internal closure at the regional level and less dependence on non-local resources and decision making. Based on Hudson's analysis we appraise current mainstream conceptualisations of entrepreneurship; the opportunistic discovery view of entrepreneurship (Kirzner, 1997b; Shane, 2003), and the emerging resourcefulness perspective (Baker and Nelson, 2005; Sarasvathy, 2008). We formulate a new image of entrepreneurship focusing on what we here refer to as re-sourcing.

Our analysis suggests that the opportunity focused view of entrepreneurship (the opportunistic entrepreneur) is obsolete, while the resourcefulness perspective offers a potential way forward. It is argued that a new conceptualisation of entrepreneurship must emphasise embeddedness in complex socio-spatial relations and a frugal attitude to resources. This form of entrepreneurship is thus resource (as opposed to opportunity) oriented, localized, and environmentally as well as socially sensitive. It is also necessary to connect the micro-level explanations of entrepreneurship to a system level view that explores economic as well as environmental and spatial dimensions by showing how resource-focused entrepreneurship is more likely to produce resilient and sustainable outcomes on a regional level.

This paper thus constitutes a modest attempt at an initial re-formulation of entrepreneurship. The attempt integrates a system level view of regional resilience – the ability of regions to recover from external shocks, be they economic, environmental or socio-spatial – with a micro level view of entrepreneurs and firms, showing how certain types of entrepreneurial actions and strategies can create system levels outcomes that build regional resilience through sustainable patterns of production and consumption.

Combining Hudson's system level diagnosis with emerging resource-focused conceptualisations in entrepreneurship makes several contributions. Firstly, Hudson's analysis as well as the remainders of the fields of geography and regional development have given limited attention to the micro-level processes of entrepreneurship (Trettin and Welter, 2011). Consequently, it offers limited explanations of how system level outcomes such as regional resilience are (partly) produced by entrepreneurial actions. This paper, however, helps provide a micro-level foundation for the system level analysis by showing how certain types of entrepreneurial actions can enable system level resilience. Depth and complexity is thus added to the entrepreneurial function at the localized level opening a possibility for an increased sensitivity to the process of creative recombination of resources, the importance of socio-spatial embeddedness, and the multiplicity of values sought and realized in entrepreneurial processes.

Similarly, dominant micro-level explanations of opportunistic entrepreneurial action have underemphasised socialized, environmental and, in particular, spatial dimensions (Anderson, 1998; Hindle, 2010; Korsgaard and Anderson, 2011; Korsgaard *et al.*, Forthcoming; Trettin and Welter, 2011). Integrating the micro-level view with Hudson's spatially and environmentally sensitive analysis of production and regional resilience provides a framework for understanding how

entrepreneurship is socially, spatially and materially grounded – where dominant concepts of entrepreneurship have emphasised primarily the economic and to some limited extent, social embeddedness (Welter, 2011).

In the remainder of the paper we start by outlining Hudson’s diagnosis of the current patterns of production and their economic, environmental and socio-spatial outcomes. This diagnosis forms the backdrop of the subsequent appraisal of the two mainstream views of entrepreneurship. Firstly, the opportunistic discovery view is explored, and found to be entirely obsolete in light of Hudson’s diagnosis. Secondly, the emerging resourcefulness perspective is shown to have promise, due to its emphasis on a frugal attitude to resources, yet still lacking a real sensitivity to the environmental and socio-spatial dimension. We end by outlining a modest attempt at a reconceptualization of entrepreneurship that offers a proper response to the current triple crunch of economic, environmental and socio-spatial crisis.

2. Sustainability and resilience; a Hudsonian diagnosis

Hudson’s analysis of late capitalism starts from the claim that current patterns of production have lost sight of production’s grounding in the natural world (Hudson, 2001, 2005, 2010).

Consequently, these patterns are unsustainable because they create serious environmental externalities and will lead to resource depletion. This problematic state of affairs is further accentuated by the fact that the economic theories currently deployed to describe and understand these patterns of production, typically do not recognize the grounding of production in material nature and will therefore tend to overlook or deemphasize the natural externalities and limits to production and consumption. Note, how Hudson’s overview echoes concerns with the prevailing “economic” ontology of entrepreneurship.

Globalization with its increasing mobility of capital and labour has been supported by policies driven by free-market ideologies (Hudson, 2010). This has led to significant growth and prosperity in some parts of the world. Yet, the limits of this development are becoming increasingly apparent. The idea that capital is infinitely mobile and that there are no a priori limits on production have granted a false legitimacy to the highly skewed socio-spatial patterns of wealth-distribution. Depleted communities and lagging regions have been the result, with serious social consequences such as e.g. urban and rural poverty (Lobao and Saenz, 2002).

Regional policies in the western world have tried to address these problems by embracing a neo-liberal thinking (Hudson, 2010). Repositioning the region in the flow of capital by making it more competitive has been the rationale – derived from Porter’s analysis of regional competitiveness – and although a rhetoric of place-bound resources have colored the policies, the fundamental idea has still been to increase the integration in global markets with the hope of short term economic growth. Yet, this increased integration also leads to increased vulnerability and to the volatility of the global markets. Consequences of this are felt in multiple regions where factory closures outsourcing and cut backs leave regions severely exposed (Simmie and Martin, 2010). In addition to increased vulnerability the results of the regional competitiveness strategy has been homogenization of places and a general lack of resilience – the ability to recover from external shocks (Hudson, 2010). The competitiveness strategy, with its emphasis of mobility and integration in global markets, also disregards the environmental costs of capital movements. Mobility and transportation may be easy and cheap from an economic perspective, yet much less so from an environmental perspective. And when environmental issues have been dealt with it is typically with end-of pipe solutions that address the creation of pollutants, yet do not impact on the resource use and hence does nothing to address the emerging and existing resource-depletion (Hudson, 2005).

In light of this development Hudson suggests that new patterns of production are needed. In particular in terms of regional and spatial policies, the natural grounding of production needs to be recognized and it is necessary to think in other terms than regional competitiveness through increased integration in global capital flows:

Given the ecological impact of existing development models coupled with their failure to create resilient economies in many regions, might we not be forced to think seriously about returning to more place-based, localized and regionalized ways of living, predicated on a different and more materially aware conception of what constitutes development? (Hudson, 2010: 16)

The new patterns of production may still be inherently capitalist in so far as they seek to create profit, and involve a distinction between labour and capital. Yet, the capitalist relations need to be embedded in, and counterbalanced by socialized relations that are sensitive to localized interests and values (Hudson, 2005). Examples abound at the margins of activities that seek to re-valorize and re-cycle commodities and resources considered valuable in a local context (see e.g. Kitchen and Marsden, 2009). Such practices may well embrace capitalist exchange, yet are not solely determined by a profit-maximization imperative (Hudson, 2005). Instead, these new patterns of production will need to be localized, and allocate resources on the basis of local concerns instead of global market equilibration. This involves making the most of localized resources from a local perspective. According to Hudson (2010) this will entail: 1) A lighter environmental footprint of production. A focus on local production and consumption will limit the mileage travelled by products in the production to consumption chain. 2) More internal closure at the regional and local level. Focusing on local resources in production makes the local production less vulnerable to fluctuations in global factor markets. 3) Less dependence of non-local decision-making. Focusing

on regional resources and patterns of consumption and a greater concern for localized problems and needs will shift the locus of power away from national and international institutions such as governments and multi-national corporations. The manner, in which such measures can be taken, of course, varies greatly from region to region (Hudson, 2010).

This new approach to thinking of regionalised and localised patterns of production has often been referred to as “resilience” (Bristow, 2010; Christopherson *et al.*, 2010; Hudson, 2010; Simmie and Martin, 2010). The resilience concept has been invoked as a response to the perceived failure of the competitiveness strategy adopted to address economic, environmental and socio-spatial problems. According to the resilience perspective the competitiveness approach has failed to create holistic approaches where environmental and socio-spatial concerns have been given priority. Either by stipulating that economic, social and environmental concerns need not be at odds and thus require no fundamental trade-offs, or by letting short term economic concerns for economic growth compromise long term environmental and socio-spatial aspirations. According to Hudson (2010), the devastating effect on some regional economies of the crisis in the financial system in 2008-2009 demonstrated the dangers of adopting a competitiveness approach as the increased integration into global capital flows exposed the regions to fluctuations in global markets completely out of the control of regional and local actors. The attempt to create short term optimisation made the regional economies highly fragile towards unexpected outside shocks (Hudson, 2010). This suggests that obtaining genuine resilience at a regional level does involve trading off short and medium economic concerns for environmental and socio-spatial concerns (Hudson, 2005, 2010).

In their insightful book on resilience Zolli and Healy (2012) argue that resilience at all levels of analysis incurs costs compared to strategies of optimization – of which competitiveness is an

example. Resilience imposes real costs, such as when firms, for the purpose of creating local value and lessening environmental footprints of production, acquire local resources that are more expensive than what can be accessed in the global market. Resilience will also decrease the peak efficiency of local economies because resilience requires significant slack resources (Zolli and Healy, 2012) and continuous exploration (as opposed to optimizing exploitation) with these slack resources. The upside to this pattern is that resilient systems are less fragile to unexpected events such as the financial crisis or natural disasters (Hudson, 2010; Zolli and Healy, 2012). The effects of a global financial crisis is lesser if a region is less dependent on global factor markets for resources and if local resources are used to target differentiated product markets. Simmie and Martin (2010) demonstrate this effect in their comparative study of two regional economies in the UK. While the Cambridge region focused on building internal capacities on the basis of existing resources, the Swansea region created bursts of rapid growth on the basis of direct foreign investments. In the Swansea region, however, the foreign investments disappeared the moment labor costs made it more economically viable to produce elsewhere, leaving the region severely lagging. The Cambridge region, focusing on localised resource bases, proved much less vulnerable to global shifts in market conditions (Simmie and Martin, 2010).

Regional resilience will thus require a partial decoupling from global markets – in particular on the factor market side – and a high level of diversification based on local resources – to make the regional economy less vulnerable to global market fluctuations.

While Hudson does not directly address the issue of entrepreneurship, it is clear that the shift suggested by Hudson involves a radical re-appraisal not only of the concepts of economy, productivity and development, but also of entrepreneurship. In the following we will suggest that

from a Hudsonian perspective the image of the opportunistic entrepreneur has been contributing to the unsustainable patterns of production, and will need to be re-imagined. What we suggest is that local resources may appear to cost more, but they are also more valuable for resilience.

3. The opportunistic entrepreneur

In light of the Hudsonian diagnosis we now appraise the two mainstream views of entrepreneurship, beginning with the opportunistic discovery perspective.

The dominant image of the entrepreneur within the research field of entrepreneurship is inspired by the Austrian notion of entrepreneurship as discovery (Shane, 2012; Shane and Venkataraman, 2000). Austrian economics – in particular the work of Kirzner – has been and is increasingly used as the theoretical backdrop from which researchers conceptualize and study entrepreneurship (Douhan *et al.*, 2007). Consequently, neo-classical models of the market have been eschewed by entrepreneurship scholars and replaced with disequilibrium models in which the entrepreneur is seen as the driving force of economic development. The entrepreneurial function is one of discovery – the entrepreneur discovers opportunities for profit and exploits them leading to profit for the entrepreneur and an improved overall allocation of resources in the market (Kirzner, 1973, 1997a). An opportunity here is seen as a price difference at a given moment in time and essentially takes the form of arbitrage –hence something that an entrepreneur can literally discover. Empirical research into the nature of entrepreneurial cognition and psychology as well as the nature of opportunities has largely been derived from this fundamental image of the entrepreneur as a discoverer of opportunities (Baron, 2004, 2006; Gaglio and Katz, 2001).

The substitution of disequilibrium models for equilibrium models have been a significant advance in entrepreneurship theorizing (Shane and Venkataraman, 2000). It has made some room for an actual entrepreneur and allowed for the integration of structural and individual/agency related explanatory figures (Anderson and Starnawska, 2008; Korsgaard, 2013). Yet, as Kirzner (2009; 1982, 1999) himself pointed out on a number of occasions, the image of the entrepreneur as one that discovers and exploits opportunities without any real account of the passage of time and uncertainty falls short of giving a realistic view of the entrepreneurial process.

It is therefore not surprising that the image of the entrepreneur as a discoverer of opportunities has been met with increasing critique. Researchers are questioning the idea that entrepreneurs merely react to market conditions and that opportunities simply pre-exist to be exploited (Anderson, 2000). A general overview of this critique goes well beyond the scope of this article (but see Korsgaard, 2013), yet we will point to a few shortcomings that are particularly relevant in relation to the Hudsonian critique of late capitalist production:

First, at the micro-level of analysis recent entrepreneurship research has failed to make explicit the spatial dimension of entrepreneurship. This is perhaps not surprising given that the discovery view of entrepreneurship really has no spatial dimension (nor temporal for that matter). In other words, building on the Austrian image of discovery, entrepreneurship scholars have been able to say quite a bit about the “how” and “who” of entrepreneurship, but very little about “where” (Hindle, 2010; Welter, 2011). Conceptualisations of opportunities have suggested that while some spaces may have more opportunities than others (Stuart and Sorenson, 2003), opportunities as such are considered as a-spatial objects, because information on prices are seen to be completely mobile across spatial contexts. This has lead entrepreneurship scholars to largely overlook the socio-spatial

embeddedness of entrepreneurial opportunities (Anderson, 2000; Hindle, 2010). And even when the spatial dimension has been integrated, the aim has been to explore how spatial barriers can be circumvented.

Second, the discovery view has a very specific yet quite abstract notion of value. Value is seen in strictly economic terms. As a consequence other types of value are overlooked and limited attention given to the social dimensions (Korsgaard and Anderson, 2011). Or in other words the disequilibrium model upon which the discovery view builds, assumes that an optimal allocation of resources in the market is equal to a maximization of social well-being (Anderson and Smith, 2007). As a consequence, the discovery view ardently promotes a de-regulation ideology. Therefore there has also been a strong tendency, when environmental issues have been addressed, to prescribe a cure of further de-regulation and commodification of environmental resources and problems (Cohen and Winn, 2007; Dean and McMullen, 2007; Pacheco *et al.*, 2010).

Third, while opportunities and resources are inexorably intertwined, there has been a strong tendency to focus on opportunities rather than resources. This is a consequence of the somewhat limited or tendential reading of the Austrians that the entrepreneurship research community have done. Kirzner as well as other Austrians have written at length about the heterogeneity of capital/resources (Foss *et al.*, 2007; Foss and Ishikawa, 2007; Foss and Klein, 2012). Nonetheless, the historical legacy, perhaps passed on from seminal studies of entrepreneurial versus managerial opportunity discovery (Busenitz and Barney, 1997; Kaish and Gilad, 1991) have dictated a focus on opportunities rather than resources. Consequently, much effort has gone into studying the nature of opportunities (Ardichvili *et al.*, 2003; Buenstorf, 2007; Chiasson and Saunders, 2005; Companys and McMullen, 2007; Dimov, 2007b, 2007a; Korsgaard, 2011a) and how entrepreneurs discover

opportunities (Baron, 2004, 2006; Gaglio and Katz, 2001), with much less effort into discussing the nature of resources in entrepreneurial processes, and how entrepreneurs creatively engage with resources to create new products and services.

Finally, at the system level, the Austrian concept of entrepreneurship as discovery is linked to a notion of the market as a learning process (Hayek, 1945; Kirzner, 1997b). Through entrepreneurial discovery, learning about the true value of resources and hence optimal allocation of these resources is achieved. The learning, however, engages only with the exchange value of resources; that is to say the market price; as opposed to e.g. the use value. Furthermore, any externalities that are not immediately economic are made invisible. In other words any relevant information learned is expressed in price, and any information not expressed in prices is irrelevant from the perspective of the market and the entrepreneurial function.

Consequently, when addressing the issue of sustainability and environmental problems, entrepreneurship scholars tend to see pollution etc. as market failures to be addressed through de-regulation. Any government intervention is – at least in principle – an interference in the learning process of the market, leading to overly suboptimal allocation of resources (Kirzner, 1997b). Examples of this line of thought include Cohen & Winn (2007) and Dean & McMullen (2007) suggesting that market failures such as flawed pricing mechanism, inappropriate government interventions, monopoly power, and information asymmetries are the root of environmental problems. While it is perfectly possible that some environmental, economic and socio-spatial challenges are in fact market failures, this view re-produces at a system level, the narrow view of the entrepreneurial function and entrepreneurial outcomes by providing explanations that one-dimensionally focuses on economics and the market. In other words, it assumes that the invisible

hand and the learning process of the market will not only lead to economically better outcomes, but also improve socio-spatial and environmental conditions.

From a Hudsonian perspective the image of the entrepreneur as an opportunistic discoverer of profit opportunities, driven solely by economic motives, and barely embedded in any socio-spatial context is obsolete. The same sentiment is presented by Sarasvathy and Venkataraman (2011) as they reflect on the recent proliferation of the use of the term entrepreneurship in non-business settings. Indeed, they argue that the practices of actual entrepreneurs have overtaken our economic theories of entrepreneurship and as a consequence our current theories fail to explain what entrepreneurs actually do, and how entrepreneurship has moved beyond creating solely economic value to driving social innovation and human development as a general phenomenon (Sarasvathy and Venkataraman, 2011).

4. The resourcefulness view

As suggested above, there has been some critique within the entrepreneurship field of the image of the opportunistic entrepreneur. Within the so-called creation view of entrepreneurship (Alvarez and Barney, 2007; Korsgaard, 2013), resources have been the focal point for interesting theorizing and research; in particular the research building on the concepts of effectuation (Sarasvathy, 2001, 2008) and bricolage (Baker, 2007; Baker *et al.*, 2003; Garud and Karnøe, 2003; Phillips and Tracey, 2007). In what we will here refer to as a *resourcefulness* perspective the relation between resources and opportunities has effectively been inverted so that resources are both conceptually, processually and ontologically prior to opportunities. And what is perhaps more important; the emphasis on resources over opportunities incorporates a frugal attitude to resources, where the fundamental entrepreneurial function is to make more of currently available resources.

Early indications that entrepreneurship may involve not just re-combination of resources – as in both Kirznerian and Schumpeterian theories of entrepreneurship – but a particular strategic and tactical approach to resources was given by Starr and MacMillan (1990). In a conceptual attempt to distinguish managers from entrepreneurs (and entrepreneurial managers) Starr and MacMillan (1990) proposed that entrepreneurs engage in different resource acquisition strategies. Instead of purchasing resources on market terms at market prices, entrepreneurs will try to coopt resources using informal social exchange terms. Such strategies include borrowing, begging, scavenging and amplifying resources. Underlying all these strategies is a Penrosian (Penrose, 1959/1995) assumption that firms cannot possibly make full use of their resources because resources have a multitude of potential uses. It is therefore possible to co-opt resources, without necessarily limiting the value of the resources for the original owners. Starr and MacMillan (1990: 84) provide the simple example of an entrepreneur borrowing office space and meeting facilities from a good friend. The entrepreneur's borrowing of the meeting facilities does not limit the value to the owner, but the meeting facility as a resource is amplified; more value is derived from the resource than was perceived possible by the original owner. Scavenging is another strategy proposed by Starr and MacMillan, and refers to the extraction of use from resources that others do not intend to use. Here the underlying rationale suggests that not only is the full usage of a resource impossible for a given owner, but sometimes the owner may not even see the potential uses of a resource.

Much of the argumentation set forth by Starr and MacMillan (1990) was later confirmed and elaborated by Baker and Nelson (2005) in their seminal article on entrepreneurial bricolage. Indeed, they find that entrepreneurs in conditions of resource scarcity – as found in e.g. rural areas and depleted communities – adopt a particularly frugal attitude to resources. They refer to this attitude

as bricolage, and define it as “making do by applying combinations of the resources at hand to new problems and opportunities” (Baker and Nelson, 2005: 333). They further suggest that bricolage is important for counteracting the tendency for organizations to enact limitations in terms of resource availability and use as well as institutional constraints. By being attentive to resources as well as opportunities, entrepreneurs can overcome the tendency to see resources as given or objective, and instead engage in creating or identifying novel uses for resources that are otherwise considered to be of little or no use. Central here is the fact that the resources in question are often used differently from how they were originally intended (Baker and Nelson, 2005). This means that resources are “reinterpreted” (Gaddefors and Anderson, 2009) and made to appear in new combinations. An implication of this is the possibility of constructing new products, solutions and institutions not on but from the ruins of older ones (Lanzara, 1999), effectively a form of recycling.

Within the resourcefulness perspective, development and innovation are driven forth, not by discovery of opportunities, but by what Dew and others refer to as exaptation (Dew, 2007; Dew *et al.*, 2004). Exaptation occurs when pre-existing resources (technologies, services, raw materials, routines etc.) are converted from a prior to a new and more valuable use. Consequently, for Dew and others resources are seen as almost relationally defined; meaning that they are not given ex ante with a definite set of potential uses or services, but rather as plastic and highly malleable. As a consequence many innovations happen not as the result of the discovery of new technologies, routines, and services (i.e. resources) but through adopting existing ones for new purposes (Dew, 2007; Dew *et al.*, 2004). Any resource is a potential candidate for any number of exaptations limited only by the ingenuity and creativity of entrepreneurs, hence

the list of possible attributes of assets [resources] is in principle limitless because we cannot predict all of the context-dependent ways in which some subpart of an artifact might have a novel use in some future situation (Sarasvathy and Dew, 2007: 16).

In other words resources are relationally defined in so far as their use and character depends on how they are combined with other resources in use, and as such they are indeterminate. This indeterminacy of resources lies at the root of both bricolage and the innovative potential of effectuation.

Appraised from the Hudsonian analysis of the current economic, environmental, and socio-spatial crisis, the resourcefulness view of entrepreneurship offers a better avenue for further development than the image of the opportunistic entrepreneur. Baker and Nelson's (2005) study of bricolage showed how resourceful strategies were very conducive for entrepreneurs in resource scarce areas, and in general the resourcefulness perspective offers a frugal attitude to resources that is much better aligned with the needs of a time of economic, environmental and socio-spatial crisis. The frugal attitude to resources focuses attention to the possibility of "doing more with less"; creating value with lessened overall resource consumption. However, despite the fact that resourceful entrepreneurs demonstrate a more frugal attitude to resources compared to opportunistic entrepreneurs, it is premature to insist that more resourceful entrepreneurial action in and of itself leads to increased system level resilience. There has been some preliminary research exploring outcomes of resourceful entrepreneurial action, most of it, however addressing micro level outcomes such as firm performance. The evidence here is mixed. On the one hand the learning approach associated with effectuation was found by Brinkmann et al. (2010) to have a relatively negative effect on economic performance, compared to the planning approach associated with opportunistic entrepreneurship. On the other hand some studies are beginning to find a positive

relation between bricolage and firm performance (Senyard *et al.*, 2010). Limited evidence of the system level effects of resourceful entrepreneurial action exists. One example is Dew et al's (2004) anecdotal evidence on the phonograph, the laser and agricultural tractors, suggesting that exaptation is an essential driver of technological innovation.

Extant findings focus on economic outcomes of resourceful entrepreneurial action only. Following Hudson's diagnosis it is necessary to challenge the one-dimensional focus on economic outcomes in order to establish an image of entrepreneurship that will offer a contribution to managing the multidimensional crises currently faced. Furthermore, while the central elements of resourcefulness certainly represent a significant advance compared to the opportunistic resource glutton of the opportunistic discovery view of entrepreneurship, it is necessary to add to the resourcefulness perspective in order to create an image of entrepreneurship that offers a coherent and comprehensive response to the triple crunch of the crisis.

5. Towards a new image of entrepreneurship

Alvarez and Barney (2007) suggest that discovery and creation (resourcefulness) are appropriate under different decision making conditions and as a consequence provide different perspectives on what the entrepreneurial function is, the strategies that entrepreneurs can undertake and the outcomes of (successful) entrepreneurial agency. In the following we will use this outline to discuss what entrepreneurship needs to be in order to provide solutions in a time of crisis. See table 1 below for an overview.

--- Insert table 1 here ---

The opportunistic discovery view presents a perspective on entrepreneurship as a function that works under risky decision making conditions where all possible outcomes and their probabilities are known (Alvarez and Barney, 2007). The objective of entrepreneurial action is economic profit, and the function is to discover opportunities – in the form of suboptimal allocation of resources – in the market. The outcome of successful entrepreneurship accordingly is improved resource allocation in the market. In the resourcefulness view, the idea of a risky decision making condition is rejected in favour of an uncertain one, where the ability to predict the future is questioned. Consequently, opportunities and markets need to be created, although still with a profit motive.

As suggested above, neither of these perspectives are entirely suitable as visions for entrepreneurship in a time of economic, environmental and socio-spatial crisis. The conditions facing entrepreneurs today are certainly uncertain – the current economic crisis once again affirmed our general inability to predict the future. Yet, it is not simply one of uncertainty, it is a condition where societies at large cannot afford to ignore the economic, environmental and social externalities of economic activities in general and entrepreneurship in particular. The current economic climate enforces a frugal attitude to resources, with capital availability leaving entrepreneurs with no choice but to use resources at hand. Similarly, long term sustainable development requires a more careful use of the world's resources (Gerlach, 2003; IPCC., 2007). The environmental crisis is a resource scarcity crisis as well as pollution crisis. Also, the unequal socio-spatial development requires a consideration of socio-spatial impacts of entrepreneurial activities. Opportunistic relocations of production have socio-spatial impacts which may be rational from a purely economic perspective yet, undesirable from a societal perspective (Harvey, 2011; Hudson, 2001). In other words: Re-sourcing as a strategy is appropriate when society can no longer afford to support entrepreneurial

action that realizes economic profit while creating serious negative environmental and socio-spatial externalities, and where entrepreneurs have an obligation to partake in the solution to the triple crunch of economic, environmental and socio-spatial crisis that impacts all. It is simply not enough that entrepreneurship creates economic growth through the more efficient allocation of resources or the creation of new markets. Indeed, in the current circumstances it may well be necessary to compromise economic profit for environmental and social value. Consequently, the creation of non-economic values must move from the periphery of entrepreneurship thinking to the center.

6. Entrepreneurship as re-sourcing

In formulating an image of entrepreneurship as re-sourcing we draw on two different meanings of the word and concept “resource”. Firstly, we follow the resourcefulness view in emphasising the importance of resources as existing stocks or supplies that can be used to achieve certain ends (Oxforddictionaries.com). Resources are ontologically and temporally prior to opportunities, and the ability to create new uses for existing resources that increase the value of the resources is a fundamental entrepreneurial function. Secondly, we emphasise that “resource” also means “an action or strategy which may be adopted in adverse circumstances” (Oxforddictionaries.com). Re-sourcing entrepreneurship can thus be seen as a particular type of strategy that entrepreneurs may or may not adopt. A strategy that is particularly useful in situations of crisis, and that it is both possible and desirable for policy makers, educators and others to promote to current and future entrepreneurs if we are to build regional level resilience. This strategy must emphasise the sourcing of resources from new places and to new ends – compared to the dominant opportunistic view of entrepreneurship. In other words the practices and purposes of entrepreneurship must be re-appraised. In the following we will consider these meanings in turn and show how these have positive system level outcomes in relation to regional resilience building.

6.1 Re-sourcing as focus on resources

Following the resourcefulness perspective the focus is shifted from opportunities to resources.

Frugal engagement with resources through re-use, recycling or up-cycling of resources thus constitutes examples of re-sourcing entrepreneurship. A well-publicized example of this form of re-sourcing is the company Terracycle (Szaky, 2009). Faced with severe capital constraints Terracycle began using old bottles for packaging their plant fertilizer. In this way Terracycle eliminated the need for new bottles, and re-used not just the material but also the shape of the bottles, lessening the environmental footprints of packaging even more through up-cycling rather than re-cycling.

Industrial ecosystems are another example of re-sourcing entrepreneurship. In such systems firms situated in the same locality exchange wastes, by-products and energy, creating in one and the same instant economic value and environmentally sustainable solutions in semi-closed systems. The Danish case of Kalundborg serves as an interesting example of this (Ehrenfeld and Gertler, 1997; Jacobsen, 2006); where the waste of some firms are used as input for production of other firms in a continuous and semi-closed circle.

From a socio-spatial perspective re-sourcing involves the use of localised resources to create opportunities. Examples of such opportunity creation processes exist in the literature, although not always under the label of entrepreneurship. Studies have shown how a focus on localized resources can lead to endogenous growth in rural, depleted and peripheral areas (Anderson, 2000; Johnstone and Lionais, 2004; Kitchen and Marsden, 2009). Within the field of regional development Kitchen and Marsden (2009) used multiple case studies of rural entrepreneurs in rural Wales to show how farmers and other locals used the unique landscape based and socio-cultural resource base of local areas to create value. Interestingly, Kitchen and Marsden – implicitly deploying an opportunistic

definition of entrepreneurship – do not acknowledge such activities as entrepreneurial, demonstrating the need for the entrepreneurship field to provide new and sustainable images of entrepreneurship.

6.2 Re-sourcing as strategy

As pointed out by Alvarez and Barney (2007), the difference between opportunistic discovery and creative resourcefulness is not just a debate over the function of entrepreneurship. For entrepreneurs the two perspectives incorporate two strategic alternatives, which are appropriate in different circumstances. Re-sourcing in our view represents a third option, appropriate for a specific condition; namely the condition of economic, environmental and socio-spatial crisis. In this condition new patterns of resource use must be created: sourcing resources from new places and to new ends.

Compared to the opportunistic entrepreneur it is necessary to establish new places to source from. The opportunistic entrepreneur acts in a global market and thus sources resources from wherever they are cheapest. The increased mobility of capital, resources and labor has enhanced entrepreneurs' ability to act on a global market, sourcing resources and production from all over the world (Harvey, 2011). The cost of transportation has too often been too small to create economic incentives for the use of local resources, and resources with a lesser environmental footprint (Hudson, 2001). Also the low cost of production in countries with low labor costs, has meant that recycling and reusing have been economically less attractive options than acquiring new resources (Hudson, 2005).

Re-sourcing as a strategy emphasizes a more holistic view of resources. Instead of sourcing the cheapest resources on the global market, focus should be on resources that are available locally, and have a lesser environmental footprint by being e.g. less industrially processed, recycled or reused. Priorities in decisions on where resources are sourced from should thus be made on multidimensional or holistic criteria taking into account and weighing local, environmental as well as economic concerns.

In a single case study Korsgaard and Anderson (2010) showed how green entrepreneur Steen Møller actively sought to create patterns of resource use that were financially, environmentally and locally sustainable. In particular the entrepreneur sourced local, industrially unprocessed and recycled resources for building projects. Furthermore, Steen Møller systematically sought to create closed systems of resource use, from which he was able to extract value e.g. from the grey household waste water by integrating waste water and food production in a closed and integrated system. And while the particular resources used depended on the particular local context of the entrepreneurial activities, Steen Møller was actually found to be able to implement the fundamental principles in geographical locations as diverse as Denmark and Nepal.

As suggested above, the opportunistic discovery view, as well as the resourcefulness view, base themselves on economic rationales referring to market conditions. As such it is taken more or less for granted that resources are sourced into new combinations for economic ends. The added value achieved through recombination is measured in economic terms.² In the re-sourcing view of entrepreneurship it is emphasised that in order to build regional resilience it is not sufficient that

² Recent work from Sarasvathy and Venkataraman has tried to take the notion of effectuation out of the economics and management domain, within which it was originally formulated. Their recently formulated ambition of forging a view of entrepreneurship as a method has considerable potential, yet does not directly neither address the recent economic crisis nor the environmental challenges faced. Rather the focus is on solving social problems such as poverty.

entrepreneurial activities seek economic ends – or at least does not realise economic ends at the expense of negative environmental and socio-spatial externalities. In other words: entrepreneurship as re-sourcing needs to source resources for multiple ends including economic, environmental and socio-spatial ends.

Recent literature in the entrepreneurship field has shown how entrepreneurship can address communal, environmental, social, cultural and other ends, sometimes, but not necessarily, in unison with economic ends (Anderson, 1998; Gerlach, 2003; Korsgaard, 2011b; Mair *et al.*, 2005; Steyaert and Katz, 2004; Thompson *et al.*, 2000). The value from resource re-combination can thus be sourced to any number of ends, depending on the particular context of the entrepreneurial activity. Consequently, instead of seeing social and environmental entrepreneurship as special cases, we see that all entrepreneurial activities have social and environmental outcomes and externalities. This line of thinking has been pursued recently by several scholars including Sarasvathy & Venkataraman (2011) and Steyaert and Katz (2004). All suggest a shift away from seeing entrepreneurship as an economic and market related phenomenon towards seeing it as a pervasive force of change in all spheres of social life, which may or may not manifest itself in new firms and economic value creation.

Exploring a new multitude of ends pursued in entrepreneurship naturally represents new challenges in terms of exploring and measuring entrepreneurial activities. Yet, the fact that it is harder to calculate value for environments, communities and social areas has not stopped entrepreneurs from engaging in a multitude of entrepreneurial activities that are directed at the market or use market exchanges for non-economic purposes. As researchers we must follow suit.

7. From entrepreneurial re-sourcing to regional resilience

Above we have presented the outline of an alternative image of entrepreneurship. The ambition in formulating this view is to showcase entrepreneurial strategies and actions that can have a positive effect on regional resilience. In the following we will sketch how the individual and firm level activities are likely to have positive effects on the system and regional level. We will also present and discuss the trade-offs and costs of adopting these micro-level strategies and actions.

--- Insert figure 1 about here ---

Figure 1 illustrates in schematic form how the micro-level strategies and actions lead to overall system effects at the regional level. Overall we argue that – *ceteris paribus* – re-sourcing entrepreneurial action leads to increased regional resilience. Regional resilience can be defined as a given region's ability to recover from external shocks (Christopherson *et al.*, 2010). According to Hudson, resilience building on a regional level requires a lighter environmental footprint of production, increased internal closure and less dependence of non-local decision making and developments.

Specifically, we argue that the frugal attitude to resources and the local and environmentally sensitive sourcing of resources will lead to an overall lesser resource use of the region. This will decrease the overall environmental stress from entrepreneurial resource-combination. It will also decrease the dependence of the region on non-local factor markets making the production less vulnerable to volatile fluctuations in these markets (Hudson, 2010). Finally, it will lead to a more intensive value creation from the local resource base. As pointed out by several regional development scholars, sustainable development at a regional level depends on the ability of local

production to make the most of local resources (Kitchen and Marsden, 2009; Simmie and Martin, 2010).

Furthermore, we propose that sourcing from new places – the use of resources locally available, reused or industrially unprocessed will have a positive effect on the overall resource consumption of the region as well as a more intense value creation from the local resources. While this may be less than optimal from a strict cost perspective it will make the region less dependent on fluctuations in global factor markets.

Finally, we propose that sourcing resource combinations to new ends is absolutely essential in the pursuit of solutions to the current economic, environmental and socio-spatial crises. A one-dimensional profit focus cannot ensure that environmental externalities are limited nor that long term economic stability is attained (Harvey, 2011). The profit driven mobility of production and capital will furthermore only intensify the unequal socio-spatial development. Sourcing resource combinations to other ends than profit will likely lead to lessened environmental footprints as well as an increased concern for local needs and problems.

8. Discussion and implications

In the above we have hopefully managed to establish re-sourcing as a more viable and positive image of entrepreneurship than the ones currently available. In doing so we have emphasized the advantages of this view as well as how it differs from existing ways of conceptualizing entrepreneurship and its function in production, consumption, and market changes. This does not mean, however, that transforming entrepreneurial activities from opportunistic discovery into re-sourcing is easy and a quick fix that will solve all problems. Turning re-sourcing from scattered

examples and academic fiction into reality would require massive and collective effort and would not be without costs and trade-offs.

Adopting re-sourcing strategies has system level consequences that are deemed undesirable in traditional perspectives of regional development: 1) It involves real costs, such as when firms, for the purpose of creating local value and lessening environmental footprints of production, acquire local resources that are more expensive than what can be accessed in the global market. 2) As a natural consequence, it is to be expected that re-sourcing entrepreneurial strategies will – *ceteris paribus* – lead to lower and slower growth compared to opportunistic entrepreneurship at an aggregate level. 3) Re-sourcing strategies if broadly adopted will decrease the peak efficiency of local economies because re-sourcing entrepreneurs will make allocative decisions that are sub-optimal from a strictly economic perspective.

Policy-makers and other stakeholders confronted with the challenge of making system level decision thus face a difficult trade-off. And while it is easy to make general claims about the need for more environmental awareness, social concerns and financial modesty, it is difficult to justify making the trade-offs involved when you are in the midst of localized conditions of crisis. As we argued above entrepreneurship theorizing has been less than helpful to practitioners. By being still firmly rooted in an opportunistic discovery perspective entrepreneurship scholars have largely been silent on how entrepreneurial action can help to overcome the difficult triple crunch of economic, environmental and socio-spatial crisis – or occasionally even worse – suggested that pursuing resilience and sustainability does not involve trade-offs.

Thinking of entrepreneurship as re-sourcing has implications for researchers looking to provide a better understanding of how entrepreneurs can help regions overcome economic, environmental and socio-spatial challenges. There is a shortage of models, theories, and experiences that researchers, educators and public actors can promote. We need to stop pushing one-dimensional models and images of entrepreneurship depicting (and legitimizing) opportunism and short-term profit-making. Yet, we need these alternative models and images to be developed. We believe that the successful development require us to:

- Develop new and better outcome measures. The well-established practice of using economic performance as the dependent variable and ultimate legitimacy of entrepreneurship research (see e.g. Wiklund *et al.*, 2003) is insufficient. Extensive exploratory research is needed to create multidimensional measures and concepts with which we can capture new entrepreneurial activities that address the current state of crisis through re-sourcing.
- More empirical work. Simultaneously, with the conceptual development further empirical work is needed to show the underlying mechanisms and patterns in those entrepreneurial activities that actually create positive system level outcomes in relation to the economic, environmental and socio-spatial development. In this paper we have made short references to some cases and placed them in a theoretical frame to demonstrate their role and function. This, however, remains at the level of exemplification. Actual empirically grounded theory building must be next. Concerns over representativeness of cases may need to be displaced to prioritize cases of high theoretical importance.

As a field we may also need to find new playmates. Entrepreneurship research has benefitted immensely from cross disciplinary work (Gartner *et al.*, 1992; Landström, 1999), but much has

come from economics, psychology and sociology. Perhaps in order to establish a better understanding of entrepreneurial activities' relation to not just markets and individuals, but also to the material world and environment, engineering science, environmental science and geography may be relevant new fields to enhance cross fertilization of entrepreneurship theorising. A major concern is to generate models to help entrepreneurs and policy makers assess not just the economic outcomes and impacts of entrepreneurial activities, but also the environmental and socio-spatial ones. Such models would also prove valuable in the entrepreneurship classrooms alongside cases and exemplars that demonstrate entrepreneurial responses to the triple crunch of crisis.

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