

A 'value' and 'economics' grounded analysis of six value creation based entrepreneurial education initiatives

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“From no source do so many errors, and so much difference of opinion (...) proceed, as from the vague ideas which are attached to the word value.” - Ricardo (1819)

Abstract

Questions we care about (Objectives). Entrepreneurial education has so far primarily leaned on a view of entrepreneurship as the creation of new organizations. This has resulted in a wide variety of courses and programs focused on business plan writing and new venture creation. A relatively new and promising trend is however to ground entrepreneurial education in a quite different view of entrepreneurship; that of viewing it as new value creation, where students learn through creating value for others. Research is however scarce so far.

Approach. To explore this trend, two guiding frameworks are developed that could deepen our understanding of the terms *value* and *economics* in relation to value creation based entrepreneurial education. A *value* framework is developed consisting of five different kinds of value, and an *economics* framework is developed consisting of three different kinds of economics. These frameworks are used to analyze six empirical cases from primary, secondary and higher education, where students from Sweden and Turkey have been studied through an emotional events based mixed methodology as they learned through creating value for others.

Results. The analysis has illustrated that value creation based entrepreneurial education could be analyzed more comprehensively through a deeper understanding of the two terms *value* and *economics*. A number of commonalities and differences have been uncovered in terms of which kinds of value were created by the students and which kinds of economics the cases lean on in terms of goals, mechanisms and logic.

Implications. A number of implications have been articulated, such as a practically relevant difference in cost-benefit ratio between value creation and venture creation, a recommendation to focus on use value rather than exchange value in entrepreneurial education and the importance of enjoyment value in entrepreneurial education based on student value creation.

Value / originality. This could be the first multiple case study focused on value creation as educational practice. It is also rare in its spanning and empirically contrasting across all levels of education. Scholarly research on value creation based entrepreneurial education is in a nascent stage, and this article contributes with new analytic tools and theory grounded analysis of similarities and differences across six different empirical cases.

Keywords: Entrepreneurship, Education, Learning, Value, Economics.

1 Introduction

According to Fayolle (2007) there are three main research strands in entrepreneurship research; studying entrepreneurship as (1) the creation of new organizations, (2) as the discovery or creation of opportunities or (3) as the creation of new value. The new value creation strand has a long history in entrepreneurship research, with roots in work by Cantillon (1755) and Say (1803). Gartner (1990) has empirically identified new value creation as a main focus of entrepreneurship in the subjective views of entrepreneurship researchers, business leaders and politicians. The value creation perspective to entrepreneurship was further developed by Bruyat (1993), who proposed a definition based on two dimensions; novelty of the value created for others and resulting impact of the process on the individual. Bruyat presented entrepreneurship as a dialog between the individual and the new value created.

The emphasis in the new value creation research strand on not only the value created but also the resulting personal growth and development makes it particularly relevant to educational applications of entrepreneurship. Letting students learn and develop through creating value for others can be a powerful method for developing entrepreneurial behavior, entrepreneurial competencies and even entrepreneurial identity (Lundqvist et al., 2015; Williams Middleton, 2013). There is also an emerging plethora of methods that can be applied for educational purposes in facilitating student value creation for others, such as effectuation, bricolage, discovery driven planning, lean startup, design thinking, appreciative inquiry and prescriptive entrepreneurship (Lackéus, 2015; Sarasvathy, 2001; Mansoori, 2016).

Value creation for others is however a relatively unexplored basis for entrepreneurial education. The narrow term *entrepreneurship* education often focuses on developing competencies needed to set up a venture, and the broader term *enterprise* education is often self-oriented in terms of aiming to develop student self-reliance, self-insight, self-efficacy, creativity, initiative taking and action orientation (QAA, 2012; Mahieu, 2006). An others-oriented value creation focus is still rare in entrepreneurial education. Nevertheless there are some emerging empirical examples that could be studied and analyzed, which is the aim of this article. Two key terms that this analysis is focused on are *value* and *economics*. Entrepreneurship is often assumed by many to be primarily about *economic* activity where monetary *value* is created (Korsgaard and Anderson, 2011). This risks neglecting other kinds of value such as social, cultural, relational and personal value potentially created through entrepreneurial processes. Clarification and widening of the terms *value* and *economics* in connection to entrepreneurship is arguably necessary in order to advance the scholarly field of entrepreneurial education. A possible starting point of such a clarification is to review extant literature that can shed light on the term “value creation”. Based on this, two frameworks are deduced, potentially illuminating what we mean by *value* and *economics* when we discuss entrepreneurial education.

This article starts with a review of the short history of value creation based entrepreneurial education. Then a comprehensive overview of singular and plural conceptions of value is done. This then results in a framework with five different kinds of *value*. It also results in a framework for three different views of *economics*, where two are well established and one is perhaps novel. These two frameworks are then used to analyze six cases of value creation based entrepreneurial education. Two of the cases are from primary education, two are from secondary education and two are from higher education. Finally some preliminary implications are summarized.

2 Entrepreneurial education as value creation

Given the nascent stage of a value creation based view of entrepreneurial education, this review of literature is necessarily thin. One of the first entrepreneurial education scholars (or perhaps the first) to focus on entrepreneurship as new value creation was Alain Fayolle. In 2007 he published a book (Fayolle, 2007) containing a translation into English of key parts of Bruyat's (1993) seminal doctoral dissertation on entrepreneurship as new value creation. This made a value creation based view of entrepreneurship more widely available and brought these ideas into the scholarly field of entrepreneurial education. Back in 1993, Bruyat proposed a definition of entrepreneurship based on two dimensions; novelty of the value created and resulting impact of the process on the individual. Bruyat presented entrepreneurship as a dialog between the individual and the new value created. The individual creates new value and is at the same time impacted by the process. The more novel the value created and the more impact the process has on the individual, the more people tend to describe it as entrepreneurship (cf. Bruyat, 1993, p. 69). Such a view implies that entrepreneurship is as much about the change and learning that the individual entrepreneur experiences by interacting with the environment as the change and new value creation the entrepreneur causes through his/her actions. An emphasis on the learning and personal development stemming from value creation activity is particularly relevant for educators, and is perhaps the key reason for considering value creation as a definitional core of entrepreneurial education. According to Bruyat and Julien (2001), the dialogic system of the individual and the value created is also an open system, implying that value creation requires interaction with the surrounding environment. This means that the individual is both influencing and is being influenced by a networked community in dynamic ways. A number of interaction centric aspects of entrepreneurship are therefore important here, constituting a key basis for instructional design in entrepreneurial education and forcing teachers to consider ways for students to interact with stakeholders external to the own group, class or school / university.

The next important step in a value creation based view of entrepreneurial education came in 2011. Three key contributions were published this year. An attempt to define entrepreneurship as an educationally useful method for value creation was published by Sarasvathy and Venkataraman (2011, p.120), stating that value creation tools should be taught on a large scale and become "an essential part of basic education". The same year Neck and Greene (2011) stated that a focus on methods for value creation represented a new approach to entrepreneurial education. A third article the same year published by Blenker, Korsgaard, Neergaard and Thrane (2011) proposed that entrepreneurial education should focus on value creation in its broadest sense, as an everyday practice. The following year a definition of entrepreneurial education leaning on value creation was proposed by Danish Foundation for Entrepreneurship (Vestergaard et al., 2012, p.11):

"Entrepreneurship Education is defined from a broad understanding of entrepreneurship: Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social."

This definition has in a relatively short period of time come to influence both theory and practice around Europe. According to a key researcher at the Danish Foundation for Entrepreneurship¹,

¹ Personal communication between Martin Lackeus and Kåre Moberg on March 3:rd 2016.

the idea to put value creation as a core part of this definition came after Alain Fayolle had visited them and talked about his book from 2007. Based on these developments, the author of this article chose to focus his PhD journey on entrepreneurial education based on value creation, resulting in two dissertations exploring this more in-depth (Lackéus, 2013; 2016). The first of these dissertations (licentiate level) articulated a classification of action-based entrepreneurial education into four different approaches; the creation approach, the value creation approach, the venture creation approach and the sustainable venture creation approach. The second dissertation (doctoral level) articulated a new educational philosophy defined as learning-through-creating-value-for-others, positioning value creation as a stepping stone between entrepreneurship and education. A longer definition of value creation as educational practice was termed as follows: Let students learn by applying their existing and future competencies to create something preferably novel of value to at least one external stakeholder outside their group, class or school/university.

Having outlined the brief history of value creation in entrepreneurial education, I will now first deduce a framework for five kinds of *value* and its creation, and then a framework for three different kinds of *economics*, based on a broad definition of economics.

3 Framework 1 - value and its creation

The main proponents of the value creation strand in entrepreneurship research have not provided much guidance on the deeper meaning of value and its creation. In their seminal article on entrepreneurship as new value creation, Bruyat and Julien (2001, p.170) merely stated that they did “not need to take up this old (and somewhat outmoded) debate”. Fayolle (2007, p.46) has at least hinted that value “relates to exchanges between market players at prices determined by the market”. Hindle (2010, p.610) has outlined a more pluralistic but equally brief view by stating that “new value may take many forms: economic, social, monetary, ecological, mental, physical, etc”. While these views on value might be enough when studying entrepreneurship in isolation, they are unlikely to give teachers and other key educational stakeholders enough guidance when the purpose is to infuse entrepreneurship as new value creation into education. This review of value creation therefore needs to venture outside the field of entrepreneurship.

I will start with an overview of singular and plural conceptions of value. The roots of singular conceptions will be traced to 18:th century economic thought, and the roots of plural conceptions will be traced to 20:th century sociological thought. These two differing perspectives on value will be summarized and integrated into a value creation framework, specifying a number of complementary views of what is valuable. This framework then also represents a return to the field of entrepreneurship through its summary of five main kinds of value creation anchored in sociological and economic theory.

3.1 Value versus values

The term “value creation” could easily lead associations to the domain of economics. Among classical economists such as Marx (1867), Smith (1776) and Ricardo (1817) there was consensus around a framework of three phases that value progresses; production (or creation), circulation (or trade / exchange) and consumption (or use / destruction) of value (Mirowski, 1991, p.143). But value is more elusive as a concept than such simple frameworks can make us

believe. Sociology scholars have assumed a more pluralistic view of value. In fact, discussions around value could be viewed as divided between economists and sociologists, illustrated by the example of Parson's Pact, a deal struck between different departments at Harvard University in the middle of the 20:th century: "You, economists, study value; we, the sociologists, will study values" (Stark, 2011, p.7). Such a division between singular and plural views of value is ultimately a question of degrees of commensurability, calculability and comparability between different more or less incommensurable kinds of value (Kornberger et al., 2015; Kjellberg et al., 2013).

A singular and standardized measure of value is often viewed as a requirement for scientific calculations, for example in economics where such calculations are used to mathematically determine prices and predict markets. But in any attempt to arrive at a singular notion of value there is a logically necessary but at the same time detrimental assumption around assumed stability and conservation of value that leads to major difficulties and inconsistencies (Mirowski, 1991). This makes modern economic theories apt for treating mature markets where focus is on routine value creation, prices, consumption and situations of equilibrium, but at the same time less useful for analyzing entrepreneurial value creation, innovation, co-creation and production (Lopdrup-Hjorth, 2013; Mirowski, 1991; Prahalad and Ramaswamy, 2004; Benkler, 2006). Narrow economic value calculations also marginalize and silence other values such as fairness, ecology, equality and the common good (Lopdrup-Hjorth, 2013; Kjellberg et al., 2013). Economic sociologist Stark (2011, p.6) asks some illustrative questions:

"What counts? Each of us confronts this question on a daily basis. Faced with decisions involving incommensurable frameworks – work versus family life, career opportunities versus loyalty to friends or attachment to a locality, vacations versus investments for retirement, and so on – we ask ourselves what really counts. What is valuable, and by what measures?"

Stark (2011) draws on Dewey (1939) to point out the dangers of separating the intellectual from the emotive through dichotomies such as value versus values, economy versus society, calculation versus judgment, estimate versus esteem, or costly versus dear. Both Stark and Dewey state that such separations lead to flawed assumptions around human action and valuation. Stark points to the fact that the term "worth" is a bridging term in that it has both an economic and a moral meaning. While semantics is not offering a solution, it helps illustrating and making us aware of the many false dichotomies at play here. Other bridging terms such as, "socioeconomics" and "wikinomics" have been proposed to describe new arenas and forms of value creation in today's society characterized by openness, sharing, co-creation and global networking defying singular categorizations of value (Bollier and Pavlovich, 2008; Tapscott and Williams, 2008). Still, the literature is largely organized around the two main different conceptions of value versus values, so integration will need to wait here.

3.2 Value according to economists – a singular view

A common basis for economic views of value is the assumption of *homo oeconomicus*, i.e. that humans are strictly rational in their daily utility calculations, always aiming to optimize (or at least satisfice) their own interests (Hirshleifer, 1985; Lemke, 2001; Lindenberg, 1990; Ghoshal, 2005). A well-quoted passage in a seminal book by the founder of modern economics Adam Smith (1776, p.7) illustrates this well: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest". Such a

utilitarian position was also developed by Bentham (1776, p.ii) who stated that what is deemed valuable should be guided by people's perceived pleasures and pains, and that society therefore should strive for "the greatest happiness for the greatest number". Economists have conceptualized value in at least three main different ways; as subjective utility perceived by a consumer, as an objective substance inherent in valuable artifacts and as a creation process where ability to create value is determined by various circumstances.

Neoclassical and neoliberal economics – value as subjective utility

Neoclassical economics studies supply and demand under the assumption that markets consist of rational individuals maximizing their own benefit (or their firm's). Neoliberalism is neoclassical economics turned into politics, asserting that society maximizes well-being of the collective by letting each individual maximize own benefit (Harvey, 2005). Neoclassical and neoliberal economics both take a similar position to value as that expressed by Smith and Bentham above; what is valuable is simply up to the recipient of value to determine – the utility-maximizing consumer exerting her freedom of choice. Here the term used is not "value", but instead "utility", semantically and conceptually in line with Bentham's utilitarianism. This represents a subjective view of value (Meynhardt and Von Müller, 2014), and was introduced in the 1870:s by Walras (1874), Menger (1871) and Jevons (1871). These theories of value were all, independent of each other, inspired by new discoveries in physics around field energy equations (Mirowski, 1991). They allowed for solving the puzzling discrepancy between the "natural" (i.e. objective) value of goods and fluctuating market prices (Meynhardt and Von Müller, 2014). The solution was simply to say that the market value *is* the value of goods, illustrated in mathematical terms as a force field of differing levels of utility, and that there is no such thing as a "natural" value of goods. The use of field equations also allowed for unprecedented mathematical precision and complexity in economic calculations of utility, opening up for new levels of analysis, explanation and prediction.

Classical economics – value as objective substance

The term "classical economics" refers to ideas developed by a small but influential group of classical economists in the 18:th and 19:th centuries. A key theme in classical economics was the substance-based value theories developed by Quesnay (1758), Smith (1776), Ricardo (1817) and Marx (1867). These now largely abandoned value theories all stated that the "natural" value of goods was determined by some objectively identifiable substance used for its production, such as corn, stock or labor time (Mirowski, 1991). The shift in the 1870:s away from such objective substance theories of value was so abrupt that the term "value" was deemed too ambiguous, unscientific and dangerous, and therefore abandoned and delegated to "the dustbin of history by mainstream economics" (Lopdrup-Hjorth, 2013, p.179). The resulting emphasis on demand (i.e. utility) and consequent neglect of supply (i.e. value creation) however led to significant limitations in ability to explain phenomena pertaining to *creation* of new value (Mirowski, 1991), which is a key topic of this dissertation. Therefore the concept of value has nevertheless been chosen as a key term here. But still, advice from Jevons (1871) to be mindful of the difference between exchange value and use value needs to be taken into account:

"I must, in the first place, point out the thoroughly ambiguous and unscientific character of the term value. Adam Smith noticed the extreme difference of meaning between value in use and value in exchange; and it is usual for writers on Economics to caution their reader against the confusion of thought to which they are liable. But I do not believe that either writers or readers can avoid

the confusion so long as they use the word. In spite of the most acute feeling of the danger, I often detect myself using the word improperly; nor do I think that the best authors escape the danger. (...) To avoid all difficulty, I shall discontinue the use of the word Value altogether” (Jevons, 1871, p.81-83, italics in original)

Strategic management – value creation as strategic capability

A practitioner oriented scholarly field that did not heed Jevons’ warning is that of strategic management of firms. Normann and Ramirez (1993, p.65) start a seminal article in the field by stating that “Strategy is the art of creating value”. Ever since Porter (1985) introduced the idea of analyzing a firm’s “value chain”, i.e. the chain of activities that generate value for a firm’s customers, the term value has been widely used by strategic management scholars and practitioners alike (Lopdrup-Hjorth, 2013). According to strategic management literature there are a number of more or less tangible factors determining a firm’s value creation capacity; activities (Porter, 1985), resources (Wernerfelt, 1984), core competencies (Hamel and Prahalad, 1990), social networks for co-creation (Normann and Ramirez, 1993), dynamic capabilities and intellectual assets (Teece et al., 1997). All these attempts to explore where value comes from could be interpreted as an unexpected revival of certain ideas from classical economics, since they all try to trace the journey of value through the production system in a manner similar to the abandoned substance value theories (Lopdrup-Hjorth, 2013). Noteworthy here is that under the co-creation logic the linear framework of production, exchange and consumption of value falls apart to some extent. In today’s global, digital and networked society it has become increasingly difficult to tell producers of value apart from consumers of value. Facebook is a particular example of this in that the website’s “customers” are actually producing billions of hours of unpaid labor work in order to allow for value to be created for Facebook’s paying (i.e. primary) customers – the advertisers (Fuchs, 2012). Another example is the outsourcing of production of financial services to the customers through use of web platforms (Benkler, 2006).

A recent literature strand in the strategic management field has explored the impact of two different kinds of value creation in firms; (1) routine value creation in terms of efficient production of what customers want today and (2) explorative value creation in terms of innovating future offerings that customers don’t even know they want yet. It has been shown that firms that are “ambidextrous”, i.e. those firms that manage to focus simultaneously on routine and explorative value creation, are more innovative, perform better financially, grow faster and survive longer (O’Reilly and Tushman, 2013). Taking into account the particularly strong link of explorative value creation to learning (Raisch and Birkinshaw, 2008) and to entrepreneurial competencies (O’Reilly and Tushman, 2004), it could be a useful distinction when considering a tentatively new educational philosophy based on value creation.

3.3 Value according to sociologists – a pluralistic view

A common basis for sociological views of value is the assumption of *homo sociologicus*, i.e. that humans are socializing, role-playing, volitional, meaning-seeking and docile individuals acting not only on self-interest but also on advice, social status, norms and values they perceive in society (Simon, 1993; Lindenberg, 1990; Fehr and Gintis, 2007; Gemici, 2008). Sociological views on value are more pluralistic than economic views and are therefore more difficult to summarize. This section will therefore necessarily be an arbitrary selection of value frameworks, included based on their utility for the purpose of this article and their ability to give a few complementary perspectives on pluralistic value theory. Three frameworks have

been taken from three different but somewhat overlapping fields; economic sociology, behavioral economics and psychology. Given that the incentive structures of society's current education systems are primarily organized around individual perspectives, the frameworks presented here are all individually focused. But they all take collectivity into account by illuminating how and why different sociological dimensions are valued by the individual.

Economic sociology – six orders of worth

Economic sociology is the study of sociological perspectives on economic phenomena (Smelser and Swedberg, 2005). A key argument in the field is that markets need to be viewed as embedded in society (Polanyi, 1944; Granovetter, 1985). Polanyi claimed that any attempt to disembed markets from society will have disastrous consequences, and that such attempts will trigger dangerous countermovements such as authoritarianism and fascism (Gemici, 2008; Smelser and Swedberg, 2005; Harvey, 2005). This has positioned economic sociology as an attack on both neoclassical and neoliberal views, united as they are in their view of the free and rational *homo oeconomicus* outlined above (Swedberg, 1997; Peck, 2008; Smelser and Swedberg, 2005). Stark (2000, p.2) leans on White (1981) to take this argument even further, stating that markets “are not simply *embedded* in social relations, they *are* social relations”, implying an impossibility of separating the intellectual from the emotional and moral. Economic sociology has advanced not only through sociologists' work (Swedberg, 1990). Some economists who have made attempts to integrate the two fields of economics and sociology include Sen (1999), Becker (1978), Arrow (1962) and Akerlof (1970). Amartya Sen for example has stated that “we should not fall into the trap of presuming that the assumption of pure self-interest is, in any sense, more elementary than assuming other values” (Ben-Ner and Putterman, 1999, p. xii).

Boltanski and Thévenot (2006) have developed one of the main theoretical frameworks for value analysis in economic sociology. The framework consists of six different “orders of worth”, labeled “worlds” of value (Jagd, 2011). In the *world of inspiration* it is qualities such as creativity, imagination and passion that are valued. A prime example of a firm successfully focusing here is Apple Computer (Boivin and Roch, 2006). In the *industrial world* what is valued is productivity, predictability and performance. The *market world* celebrates competition, rationality and desire for scarce goods and self-benefit. In the *domestic world*, worth is determined by hierarchies and relationships between people and associated esteem and reputation. Key determinants here are traditions, social dependencies and loyalties. The *world of fame* positions value in the number of people that grant their recognition through reliance on “appearance, stardom and superficiality” (Boivin and Roch, 2006, p.411). Finally, the *civic world* encapsulates collective common good values such as fairness, democracy and solidarity. According to Boltanski and Thévenot (2006), people's actions and valuations are simultaneously justified and legitimized through all six worlds, but to varying degrees depending on each situation. Still, each world has its own metrics, measurement instruments and reifications. These six worlds are shown in Figure 1 below.

Behavioral economics – five consumer values

Behavioral economics combines economics with other fields that empirically study human behavior, primarily psychology but also other fields (Wilkinson and Klaes, 2012; Kahneman, 2003; Weber and Dawes, 2010). A pioneer in this field was Nobel laureate Herbert Simon, who

modified the rationality assumption underlying neoclassical economics by stating that rationality is “bounded” (i.e. limited) by lack of information, limitations in human cognitive power and the presence of multiple and shifting personal wants (Simon, 2000). According to Simon (1993; 2005) humans respond to this by carefully listening to others’ advice, constantly learning in social settings and internalizing rules of thumb (i.e. heuristics) that can be used for future decisions on which actions to take. This results in behavior that at times appears altruistic, i.e. helping others with no expected reciprocity, thereby deviating from the mainstream economic assumption of self-optimizing behavior. Whether it is, in fact, altruistic or a future-oriented, dynamic and “intelligent” form of subtle egoism is a question often discussed by scholars (Batson et al., 2008; Simon, 2005; Axelrod and Hamilton, 1981). In general, a key topic in behavioral economics is the issue of non-egoistic preferences, triggering a need to empirically study “how real people actually behave and decide” (Weber and Dawes, 2010, p.91).

A widely applied value framework in behavioral economics has been developed by Sheth, Newman and Gross (1991). They took consumer decisions as a starting point of empirical analysis and ended up with five different values influencing consumer choice; functional, emotional, epistemic, social and conditional value. *Functional value* refers to consumers’ perceived utility in terms of product function or performance. *Emotional value* stems from a capacity of products to arouse feelings that consumers value. *Epistemic value* is based on consumers’ curiosity, novelty and desire to learn. *Social value* is derived from utility related to consumers’ participation in groups. Examples include jewellery, clothing, gifts and cars that convey a desirable image to others (Sheth et al., 1991, p.161). Finally, *conditional value* depends on needs that arise out of situations such as seasons and cultural events, where consumers would otherwise be at odds with the situation they find themselves in. With its focus on how consumers choose between alternative products, this framework arguably aligns more with the singular view of a self-serving *homo oeconomicus*. Still, the framework illustrates how multiple values are combined by consumers to form perceptions of utility. These five values are shown in Figure 1 below.

Psychology – five perspectives on what humans value

Motivation and well-being theories stemming from psychological research constitute one possible starting point in an investigation of what humans find valuable. It is also particularly relevant here, given the impact that student motivation can have on learning (Boekaerts, 2010; Snow et al., 1996). Fiske (2008) has synthesized the vast literature on motivational research into a framework consisting of five different perspectives. According to Fiske, human motives differ depending on whether we (1) study patients on the psychoanalytic couch, (2) examine our own consciousness, (3) watch students in the classroom, (4) use the computer as a metaphor for cognitive understanding or (5) study group members in a collective. On the psychoanalytic couch people appear hedonistically self-focused on maximizing pleasure and avoiding pain, in line with utilitarian economics. When studying people’s conscious experiences they appear optimistic, future-oriented, trust-based and focused on functional potential to get things done, i.e. an emphasis on the emotional enjoyment and flow inherent in human valued activity. In the classroom the clear-cut incentives in a constructed learning environment make for behavioristic motives based on students’ expectance to achieve a goal and the perceived value of achieving it. When using the computer as a metaphor for researching human cognition, scientists have

studied mental and social aspects of how people process information in order to reach a coherent understanding, i.e. aiming to reach a harmonious experience free from individual and collective dissonance and disjuncture. When studying groups the motives for belonging to a social collective seem endless, ranging from surviving, reproducing and conforming to collectively acting, understanding and sympathizing.

Another value framework anchored in psychology has been developed by Seligman (2012), consisting of five measurable elements of subjective well-being; positive emotion, engagement, relationships, meaning and achievement. *Positive emotion* is interpreted as a mood induced by a pleasant life. *Engagement* is interpreted as being in “flow”, being completely absorbed by a task and losing track of time. *Relationships* is interpreted as meaningful experiences shared with other people, often in close and long-term relationships. *Meaning* is interpreted as belonging to and serving something that is bigger than the self, often despite its sometimes detrimental impact on other elements in the framework. *Achievement* is interpreted as achieving one’s goals solely for their own sake, isolated from any eventual resulting impact on the four other elements of the framework, i.e. winning just for the sake of winning.

Yet another theory anchored in psychological well-being research is the logotherapy theory by Frankl (1985), emphasizing humans’ strive for meaning, in contrast to Freud who emphasized will to pleasure and Nietzsche who emphasized will to power (Frankl, 1985, p.99). Finally, recent work by Metz (2009) and Baumeister et al. (2012) has emphasized two main and only partly overlapping sources of human well-being; happiness and meaningfulness. Baumeister et al. (2012) showed empirically that happiness is primarily self-oriented and associated to being a taker, whereas meaningfulness is primarily others-oriented and associated to being a giver. The varying perspectives of motivation and well-being outlined here are summarized in Table 1. Based on this summary, five resulting kinds of value creation are articulated. These five kinds of value creation are also shown in Figure 1 below.

Table 1. Five different kinds of value creation. These five kinds of value creation constitute a summary of psychological research on human motivation and well-being.

Focus	Motivation theory (Fiske, 2008)	Well-being theory (Seligman, 2012)	Will to... (Frankl, 1985)	Resulting kind of value creation
Primarily “happiness for oneself” oriented factors (Metz, 2009; Baumeister et al., 2012)				
Self-analysis	Psychoanalytic couch based hedonistic self-focus	Positive emotion	...pleasure	Economic / subsistence value creation
Goal / power	Expectancy-value theories of goal prediction and control	Achievement	...power	Historical / pride / power value creation
Primarily “meaningfulness with others” oriented factors (Metz, 2009; Baumeister et al., 2012)				
Action-taking	Conscious focus on future-oriented functional action	Engagement / flow	...meaning	Personal / pshychological value creation
Belongingness	Coordinated and interdependent teamwork and relationships	Relationships	...meaning	Relational / social value creation
Processing	Mental / social processes of reaching coherent understanding	Meaningfulness	...meaning	Equalizing / harmony / cultural value creation

3.4 Summarizing into an integrative framework for value creation

The literature review undertaken here has shown how difficult it is to disentangle an egoistic focus on doing well for oneself from an altruistic focus on doing good for others. It is arguably more fruitful to see them as “two primal, separate standing, yet complementary forces found in all things” as the idea of yin and yang in Chinese thinking suggests (Chen et al., 2010, p.175). Further, according to Dewey (1939), Polanyi (1944) and Stark (2011), disembedding and dichotomizing self-oriented value creation from others-oriented value creation is a detrimental and dangerous path to take. Therefore in order to form a more integrative foundation for later discussions on value rather than the dualistic Parson’s Pact based view found in the literature reviewed here, Figure 1 graphically summarizes how the three pluralistic perspectives on value discussed in section 3.3 integrate with the singular perspective on value discussed in section 3.2. Five different kinds of value creation are illustrated in Figure 1, arguably constituting a possible and useful summary of value creation literature. All five kinds of value creation are pictured as relying on a common integrated core of value for oneself *and* for others.

The five kinds are labeled as follows; economic, enjoyment, social, harmony and influence value creation. *Economic value creation* could be viewed as primarily self-oriented attempts to create value for oneself by delivering what others want. In entrepreneurship literature this is a very common view of value creation (Korsgaard and Anderson, 2011). *Enjoyment value creation* could be viewed as value creation just for the pure joy / fun of it. Schumpeter proposed this to be an important value for people acting entrepreneurially (Goss, 2005). *Social value creation* could be viewed as an others-oriented kind of value creation focused on making other people more happy or relieving their suffering. This parallels to social entrepreneurship, a major theme in entrepreneurship research (Tan et al., 2005). *Harmony value creation* could be viewed as value creation that makes more sense as a whole, culturally or in relation to collective values such as fairness, ecology, equality and the common good. While a quest for harmony is perhaps not a common theme in entrepreneurship research, it has been proposed as a useful and theoretically well-grounded view of entrepreneurship for educational purposes (Blenker et al., 2012). *Influence value creation* could be viewed as creating value in order to increase one’s influence, power or historical legacy. Such a view of entrepreneurship as societal change through economic or political history-making has been proposed in an influential book by Spinoza et al. (1999).

While value creation arguably could be graphically summarized as consisting of more, less or indeed other kinds of prototypic value, Figure 1 nevertheless illustrates the many kinds of value creation that entrepreneurship can contribute with to educational practice. Figure 1 also illustrates Polanyi’s (1944) general point around the shortcomings of an economic and disembedded view of value, impacting the infusion of entrepreneurship in education. Teachers could be encouraged to draw from many different kinds of value creation when making the leap from entrepreneurship to education, stepping on a stone consisting of multiple perspectives. In line with the view put forward by Boltanski and Thévenot (2006), it is recommended to view every entrepreneurial value creation activity in education as simultaneously containing the entire stepping stone, i.e. all five kinds of value articulated here, albeit present to a varying degree for different people and in different situations. In one single day of the life of a business or student entrepreneur all five kinds of value could arguably be present, with the emphasis changing hour by hour or even minute by minute depending on how the day unfolds.

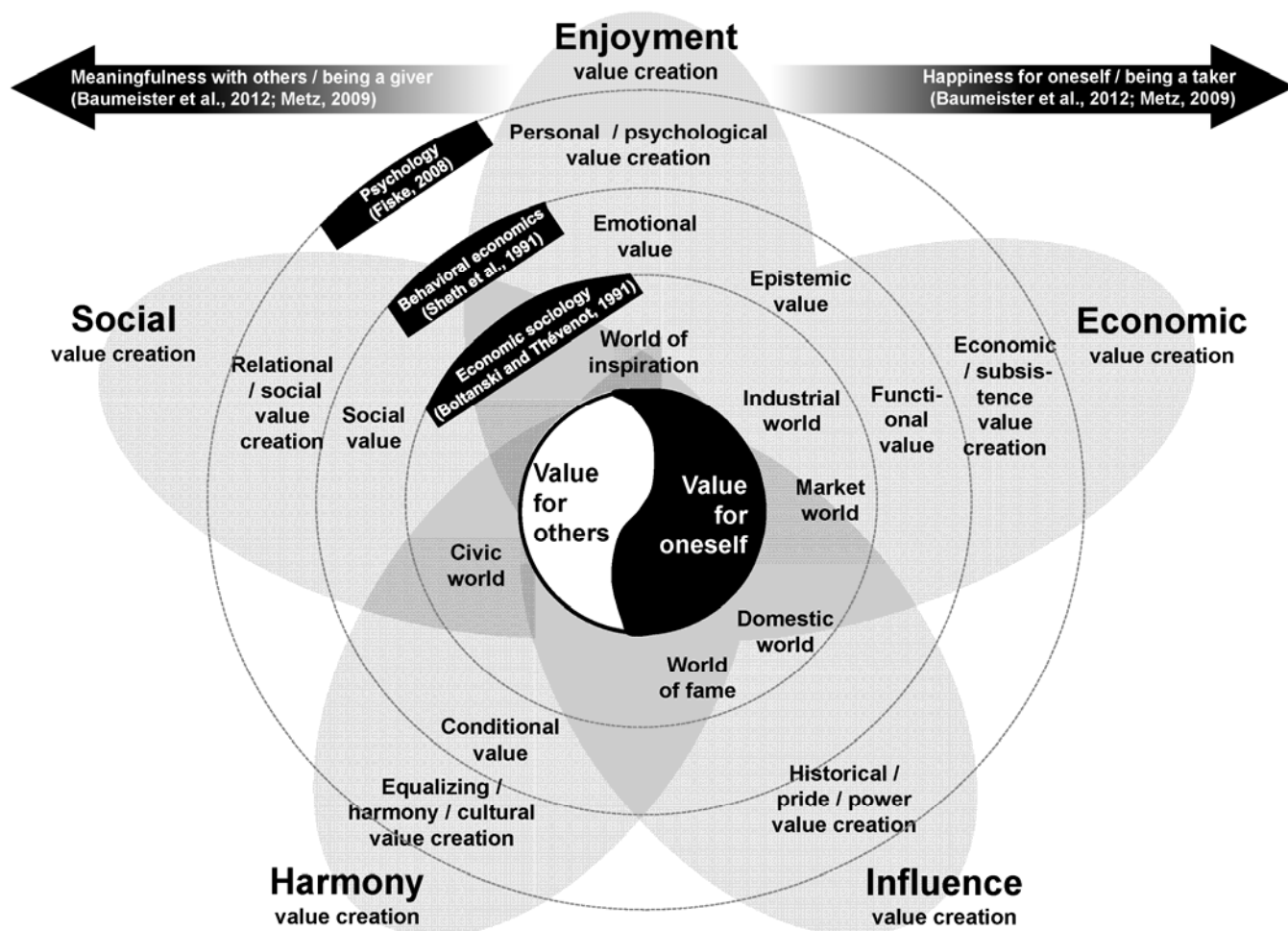


Figure 1. Framework 1 - five different perspectives on value creation. Three pluralistic perspectives of value are integrated with a singular economic perspective of value. The five resulting kinds of value are positioned in a force field ranging from meaningfulness to happiness.

4 Framework 2 - students as economic actors

When students are asked to learn through creating value to the world outside their own educational institution, they engage in what could be viewed as economic activity. At least if economics is defined broadly in line with Robbins' (1932, p.21) definition: "human behavior as a relationship between ends and scarce means". The scarce means are students' competencies, their time and their efforts, and the ends are the instances of subjectively perceived utility that are produced for external stakeholders by students creating value. I posit that this could be viewed as a new kind of relationship based *educational* economics, where focus is on nascent value creation for the purpose of maximizing learning, see Table 2. This contrasts to a supply based entrepreneurial economics with its effectual co-creation logic, where focus is to create new kinds of utility and transcend into a state of established markets and prices. It also contrasts to a demand based neoclassical economics with its customer choice based logic, where focus is to maximize utility and predict markets and prices under situations of more or less perfect competition.

Table 2. Framework 2 - three kinds of economics. Educational economics where students are asked to learn through creating something of value to others is contrasted to entrepreneurial economics and neoclassical economics.

	Educational economics	Entrepreneurial economics	Neoclassical economics
Goal	Foster learning	Create new kinds of utility	Maximize utility
Mechanism	New relationships to learn from	Supply of a novel and emerging concept	Demand from customers
Logic	Means based: student ability and willingness	Means and ends based: Co-creation	Ends based: Consumer choice
Market	Non-market, non-price	Aim is to establish new markets and prices	Focus is on predicting markets and prices
Numerary focus	Single digit number of value creation attempts	Up to 100s attempts to scale value creation	Infinite number of value creation instances
Value creation kind	Nascent	Exploratory	Routine
Competition	No competition except alternative uses of time	Low competition due to nascent market	High competition in a near perfect market
Quantifiability of uncertainty	Low to none	Low to medium	High

Based on this distinction I also posit that value creation as educational practice is of the most legitimate kind when it focuses primarily on the early phase of artifact production, outside of established markets and price levels. This represents a means based, relationship driven and early exploration based kind of value creation, avoiding transactional and market based routine value creation. The risk for unfair exploitation of students and illegitimate competition with established market actors is thereby minimized. Figure 2 shows how this also maximizes the opportunity for learning due to the characteristics of the typical learning curve for any kind of practically oriented activity, characterized by sharply diminishing returns associated with repetition (Arrow, 1962). If students despite these recommendations are used for routine value creation, motivated by for example the novelty and consequent learning opportunity it represents for the individual student, they should be financially compensated to some extent, deducting however the additional cost for taking care of the student. This avoids student feelings of being exploited and unfair market advantage for the organization benefitting from the student's value creation capability. A particularly interesting application of educational economics is to let students learn by serving needs of disadvantaged groups in society that regular markets forces systematically neglect.

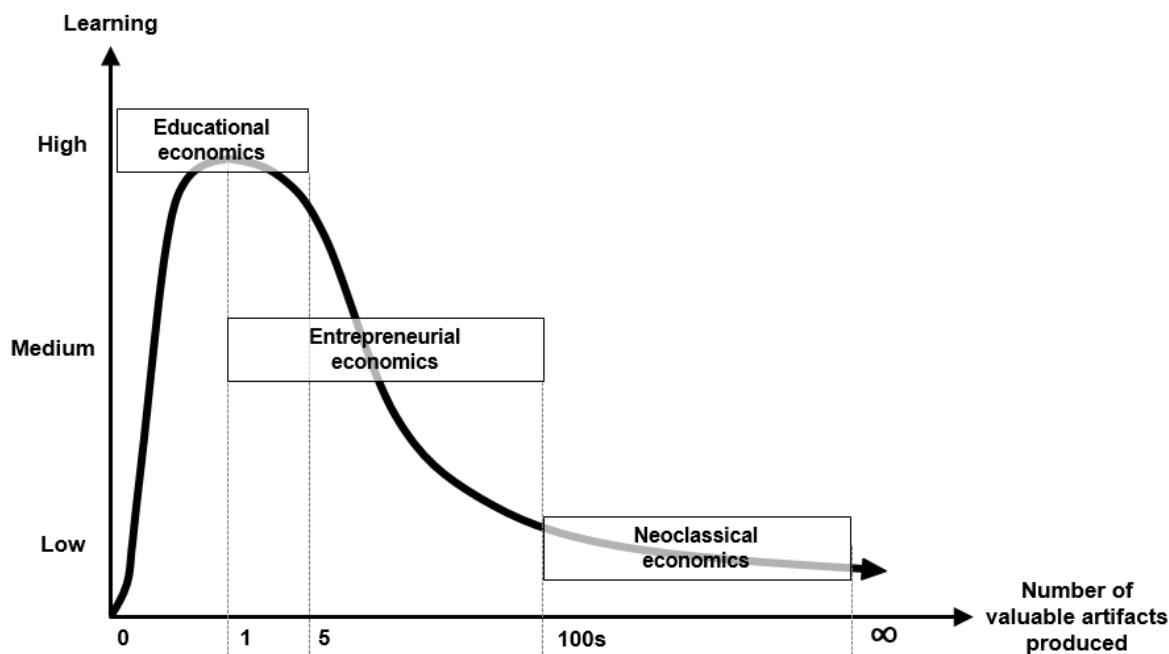


Figure 2. Relationship between learning and number of valuable artifacts produced. The figure illustrates how value creation as educational practice works at its best in low numbers of artifacts produced, where the learning curve reaches its peak and where value creation is nascent or explorative.

5 Empirical analysis - applying the two frameworks on six empirical cases

In order to test the usefulness of the frameworks outlined above, they will now be used to interpret and make sense of six empirical cases of value creation as educational practice that I and my colleagues (see acknowledgements) have studied in-depth over the last couple of years. Their relation to the two frameworks are summarized in Table 3. The value framework will be used to discuss which kinds of value were created in each of the cases. The differing characteristics of the three kinds of economics will be applied to discuss goals, mechanisms and underlying logic in each of the six cases. Two of the cases are of a venture creation kind, but have as a key characteristic that real-life value is created for external stakeholders during the educational intervention. This is often not the case in entrepreneurship courses and programs, frequently focused on business plan writing without real value being created (Honig, 2004; Jones and Penaluna, 2013).

An emotional events based mixed methodology was used to collect data, building on mobile app based experience sampling and interviews (see Lackeus, 2016). In all cases, except for the drama and music students, a mobile app was administered to the students, capturing significant and emotional learning events. Through an app report based extreme case sampling strategy (Flick, 2009, p.122) and individually tailored interview template construction, students to interview and topics to discuss were then chosen depending on where interesting effects in terms of powerful learning could be seen with the mobile app. A semi-structured approach was used for the interviews; introduction to the study, general lessons learned by the student, app-induced questions around specific emotional events, other crucial events in general, what had motivated them, similarities and differences between this and other learning environments and important decisions made by the student lately.

Table 3. Six empirical cases and their relation to the two frameworks. The table illustrates how enjoyment value is the most common kind of value created, and that economic value is more focused in venture creation than in value creation set-up. The table also illustrates the importance of educational economics as a kind of economics supporting and explaining value creation assignments in education.

Case	Class	Value created					Kinds of economics		
		Economic	Enjoyment	Harmony	Social	Influence	Educational economics	Entrepreneurial economics	Neoclassical economics
Primary education (6-12 years old)									
Students in Istanbul protecting nature by collecting waste oil from restaurants / households.	Value creation	-	*	***	*	*	***	-	-
Students in Skövde teaching younger students at a neighbour school about the body.	Value creation	-	***	-	*	-	***	-	-
Secondary education (12-18 years old)									
Students in Kungsbacka broadcasting a radio program through a local radio station.	Value creation	-	***	*	-	*	***	-	*
Students in Malmö starting a mini-company through the Young Enterprise model	Venture creation	***	***	*	*	-	*	-	***
Higher education (18 years or older)									
Music and drama students at University of Gothenburg creating a personal value pitch	Value creation	*	***	*	*	-	***	*	**
Students at Chalmers University of Technology starting real-life technology based ventures	Sustainable venture creation	***	-	*	*	-	*	***	-

5.1 Two cases from primary education

As part of an EU project initiated in 2014, a primary school in Istanbul started working with value creation as educational philosophy. Using a value creation assignment form designed by the author of this article (see Lackeus, 2016), the teachers designed around ten different value creation based assignments. One of the assignments was in science class, focused on the damage that waste oil makes to the nature. When informed about this and asked to use their knowledge to create value for external stakeholders, the students came up with the idea to start collecting waste oil from households and restaurants, and deliver this oil to the municipality's oil collecting centers. The value that was created was primarily harmony value, since this was an act of protecting nature from a damaging dissonance potentially caused by waste oil. Other kinds of value created were enjoyment value for the students stemming from the inherent enjoyment in helping others with waste oil collection, social value since the students helped thankful restaurant owners and households to increase their awareness around ecological issues, and influence value for the students since many of them for the first time in their life felt that they could make a difference in the world. Given the absence of market mechanisms, conceptualization, competition or economic value created, this was an instance of educational

economics. While the empirics is not yet fully analyzed, preliminary findings illustrate how interaction with external stakeholders and teamwork triggered self-efficacy, self-insight, perseverance and entrepreneurial passion. Two students said:

"By learning this, we learned also about our environment. (...) Some of my neighbours were completely unaware of this. For example, I had done a survey which showed that one liter of waste oil destroys 1 million liters of seawater, causing marine wildlife to die and sewage blockages. (...) First they were shocked, did not believe what I said. (...) Actually, I am quite shy. (...) Even I myself was surprised that I could then go and talk to them. Well done of me that I have been able to persuade them. It is the first time in my life I have done such a thing. (...) If we are taught by searching in different ways, knowledge will become more permanent and long-term. For we have learned that knowledge by effort."

"We went to a cafe and we informed them there. (...) They had no agreement with any company so we made sure they made an agreement with the municipality. (...) They really listened to us and took us seriously. I got happy. I have learned that people take us seriously and that they listen to us. It is not just from adults that you can learn, you can also learn from people who are younger. We can teach people who are older than us and that we don't even know. ... Within me I thought 'God, what a great experience, there are people who listen to us and the people in our country will be educated. Our country's future will be good.' (...) I get happy when I impact others."

Since 2011 a group of teachers in a school in Skövde has worked according to the principle of always having an external recipient of value for all project work they do. They have worked with recipients such as the local library, the local police, tourists and other students. In a research project conducted for Swedish National Agency of Education one class in Skövde was studied while doing such a project. Students of age 10-11 constructed an exhibition containing knowledge about the human body for younger students of age 8-9 at a neighbouring school. For the younger students, coming to this exhibition was a way for them to get to know the school they would start in soon, and also to learn about the human body from older students. The value that was created was focused on the joy of learning (i.e. for the younger students) but also the joy of teaching (i.e. for the older students), and could thus be described as epistemic or enjoyment value. Social value was also created, since the older students helped the younger students to take care of their body and facilitated for them to get to know people in their soon to become new school. Given the total absence of markets, prices and competition, and the one-off nature of the value creation processes, this is a typical example of educational economics. The research is still in progress, so it is too early to generalize around learning outcomes. A student said:

"It was exciting and fun to feel that we were very important. I taught them new things and they taught me some new things I did not know before. (...) I trained myself to present to others and to work in a team. (...) I got to take own responsibility (...) It's fun to teach others things and then it becomes meaningful to do work and then teach things. I get happy, it feels fun to work, kind of. One gets the strength to continue working on everything. (...) I don't play about as I otherwise usually do, but I concentrate and work as I should. (...) I learn more when I need to do something for others than when I don't need to do that. This is evident when we follow up my work, it works better for me when I have to report to other people."

5.2 *Two cases from secondary education*

A pedagogical concept named RadioAktiv developed by non-profit foundation Framtidsfrön was used in Kungsbacka for students 13-14 years old (Lackéus and Sävetun, 2014). The students were given a group assignment to produce a radio program of one hour to be broadcast locally in their municipality, constituting an assignment to create something of value (a radio program) to people outside their school (listeners). The value that was created for the listeners was primarily enjoyment value, but some students also wanted to make an impression on their listeners by creating a disharmony that listeners could react to, thus perhaps leading to a later state of harmony for listeners making sense of what they had heard. This then created influence value for the students if they could succeed in impacting their listeners. The focus was learning from a singular attempt to produce a radio program, thus in line with educational economics. Still, the program was broadcast on the regular media market, thus drawing on neoclassical economics resources. Interaction with outside world and teamwork were found to be key emotional events triggering the development of a variety of entrepreneurial competencies such as self-insight, social and collaborative skills, self-efficacy and perseverance. The prospect of external stakeholders being impacted also motivated the students much more than usual school work did. Two students said:

"Some things in school don't feel so serious ... I took this quite seriously because it's radio and everything ... it's not just for us in the class to see and hear, but it is for others outside also ... then if there are a hundred or a thousand or a million [listeners], it doesn't matter. It's still others than in class."

"It's very important to capture the listeners' attention to get them to think for themselves and ... remember it. It's really the whole point, to get others to respond and become impacted. Otherwise there is no point to do it"

In Malmö students following the Company Program of non-profit foundation Junior Achievement were studied in 2014. The students started out by recognizing an unfulfilled market need, wrote a business plan, set up their company, raised capital, developed and marketed their product or service and finally liquidated the company. Each year around 25.000 students participate in this activity all over Sweden, and the purpose is to develop competencies in product innovation, entrepreneurship and commercial activities. Focus is primarily on economic value for the venture and enjoyment value for the customer, but each year there are also some student teams focusing on ecological and social value creation. The program is primarily based on a neoclassical economics logic where many student teams buy merchandise from overseas and sell it at a higher price point on a consumer market. Students are expected to predict the market by developing a pricing strategy fit for an existing market, calculate the net profit and illustrate how they stack up against the competition. The most important activities that triggered student learned learning were value creation for others, team-work experiences and interaction with outside world. This primarily led to increased entrepreneurial passion and marketing skills. The students reported a number of factors increasing their motivation, such as good support from teachers and staff at Young Enterprise, good feedback from customers, opportunities to apply their competencies in practice and feelings of ownership of the process. Two students said:

"We tested on a lot of customers directly – 'oh god how nice, neat' (...) and that was very funny, I thought like, I have done this myself, or we have, and then you come back and you feel like okay,

now I've done a good job, pat yourself a little on the back as well. (...) a little push, kind of, yes now let's keep selling, I have to find new people who will be just as happy."

"I didn't think there were so many processes that had to stay together for it to be a Young Enterprise business but I think it's great and I now feel that when I graduate I might be able to start my own company, because I've experienced this whole process and made contact with so many external people. I've called around and heard them how to do this, and asked 'can you give me some advice?'. (...) You get many more contacts (...) I've grown as a person. You must be able to rely on yourself and say that 'this idea, I'm going to fix it', and try to take on and make it."

5.3 Two cases from higher education

A venture creation based master program was started in 1997 at Chalmers University of Technology and subsequently developed towards increasingly valuable outputs (Lundqvist and Williams Middleton, 2008; Williams Middleton, 2013). In 2016 some 75 companies had been created, employing around 400 people. Venture creation programs are defined as entrepreneurship programs where students learn through starting a real-life venture with an intention to incorporate it post graduation (Lackéus and Williams Middleton, 2015). The primary focus for most students teams is to explore and develop the economic value of a technological invention. They are asked to produce a business plan, but also to hone their value proposition through multiple interactions with a wide variety of external stakeholders. Most student projects initiate technical product development during the one-year incubation program. Focus in this program is thus primarily on economic value, although some of the ventures have a more sustainability oriented value proposition, thus emphasizing harmony value. Some ventures have also been focused on life science and thereby aiming for social value, but still with economic value as a main focus. The main emphasis is to co-create new utility by developing a novel technology based concept, thus anchored primarily in entrepreneurial economics. But there is also an educational economics component since a key goal of the program is student learning from relationship building. Key sources of learning for the students are interactions with external stakeholders, teamwork and uncertainty, leading to increased self-efficacy, self-insight, uncertainty tolerance and formation of an entrepreneurial identity (Lackéus, 2014). A student emphasized the importance of real-life interactions (ibid, p.387):

"It had certainly not been the same if it were not for real. Then it would have been like any other school project that you have done, you might say. Yes, I would say it's a feeling that you e that you can e that you e yes, and that people trust you, that our idea partners can come to us with this idea and trust that we can do something good out of it e that they give you their trust and that e I do not know why it is so immensely motivating that it's real, but it really is."

A pedagogical platform developed by Swedish non-profit foundation Drivhuset (Ben Salem Dynehäll and Lärk Ståhlberg, 2015) was tested in 2012 at an entrepreneurship course at University of Gothenburg for drama and music students. The participants were asked to iteratively hone a value pitch over the course of three months by testing it on external stakeholders of their choosing. The value pitch was based on the students' own skills in music and drama and on ideas they developed around what could be valuable for others. Tools taken from effectuation (Sarasvathy, 2001) and customer development (Blank and Dorf, 2012) were used to support the students' value creation attempts. Given their skills in music and drama, the value they tried to create for others was primarily enjoyment based, but also social and harmony based in terms of making people happy or giving them a cultural experience of increased

personal harmony. Economic value was also considered, given the interest of the students to be able to make a living as a musician or actor. Most attempts to create value were nascent or exploratory with no or low competition, thus being in line with educational and perhaps entrepreneurial economics. One of the students honed a job application pitch aiming for the regular job market for actors, thus representing a more neoclassical economics approach. The course was well received, and the students reported about strong personal development, increased self-efficacy, high levels of motivation, improved action orientation and a more entrepreneurial mindset. Also more cognitive skills were gained, such as market based planning and analysis. One of the students said afterwards:

“One should try to be a freelance, and then it's fantastic to get a task where you are supposed to do what you need to do. And then you do it. And then both I get happy and it turns out well. (...) For me, this has realized my dreams, you could indeed say. (...) Almost every day, I felt that now I am almost going to cry. Because this is exactly what I want to do. It's exactly what I could have dreamed of. And I stand here and do it. And get paid for it. And everyone is happy and satisfied. And they think it's so good. Yes, it's kind of crazy. I think that this course was like 'break a leg' for me. Getting away from sitting at home having all these ideas in my head.”

6 Discussion

A commonality across all six cases is that doing something of potential value to an external stakeholder triggers high levels of student engagement, motivation and emotionality. While direct interaction with external people is a strong triggering factor, it is not a required factor as seen in the radio project. Another common factor across the cases is the important role that enjoyment value plays. While entrepreneurship is often seen as focused on economic value creation (Korsgaard and Anderson, 2011), these cases show that a more important kind of value in educational settings is enjoyment value, also in an economic value focused exercise such as Young Enterprise's Company Program. Some kinds of value were however less common in the six cases. Harmony value was in focus only in one of the cases, where students in Istanbul acted on the ecological risks of waste oil. As advocated by Blenker et al. (2011; 2012), acting on personal disharmonies could be explored more as an explicit strategy in entrepreneurial education than seems to have been the case in these six cases. Social value was to some extent prevalent in many of the studies, but still seemed to be secondary compared to the focus on enjoyment value and economic value. Assignments directly aimed at helping more or less disadvantaged people represents an opportunity that was relatively unexplored in all of these cases. As mentioned earlier, compensating market failures is a task that educational economics seems particularly well suited for. Influence value was also a relatively unexplored kind of value. Teachers could perhaps focus more on leveraging students' willingness to make a difference and influence society, as well as let students empower other people in society to make a difference. Students could be asked to learn through giving voice to people that rarely get to influence society, such as marginalized groups. In any endeavor to create value that the market does not fully address, a possibility could be to let students get inspired by the 17 sustainable development goals decided on by United Nations².

² See www.un.org/sustainabledevelopment

A commonality across the value creation focused cases was the strong alignment with educational economics in terms of a main focus on learning, relationships to learn from, non-price and non-market, absence of competition and one-off value creation assignments. This means that the four cases focused on value creation confirm the value of articulating a new kind of economics, since it helps distinguishing what entrepreneurial education based on value creation does and does *not* focus on. The two cases that focus on venture creation are rather in line with other kinds of economics; entrepreneurial and neoclassical economics. A reason for this could be that the venture as a construct inherently implies a market, competition, choice and transaction logic. As soon as organizational aspects of entrepreneurship are brought up, some aspects of educational economics seem to be replaced with a more transactional and instrumental logic, relying on exchange value rather than the use value being delivered in a personal direct relation between the value creating student and the end consumer of value. This then resonates with Jevons' (1871) recommendation to be mindful of the difference between use value and exchange value. Perhaps value creation as educational practice should primarily focus on use value and let any instances of exchange value wait until later stages when students have self-selected into more narrow conceptions of entrepreneurship viewed as organization creation. Still, also the venture creation based cases could indeed benefit from emphasizing a more educational economics oriented logic, and could thus also benefit from the articulation of a new kind of economics where students create value directly to the end consumer as is the case in service oriented businesses.

The two venture creation focused cases illustrate a previously hypothesized difference (see Lackeus, 2013, p.25) between value creation and venture creation based education in terms of different levels of complexity. While both value creation and venture creation trigger strong feelings of engagement and perceived relevancy, the six cases illustrate that a value creation focus is considerably less complex to manage for the teacher. If assumed that complexity is associated to cost, this means that the cost-benefit ratio of value creation is better than that for venture creation based entrepreneurial education. Not necessarily because value creation would give stronger effects, but because the associated cost is lower.

Another difference between venture creation and value creation is which kinds of value are in focus. In the value creation focused cases, economic value is de-emphasized and social, harmony and enjoyment value is emphasized. In the venture creation focused cases, economic value is emphasized, even if also other kinds of value are present. Given that economic value is on the far right side of the altruism versus egoism scale, venture creation could be viewed as a more egoistic and self-oriented kind of entrepreneurial education, whereas value creation could be viewed as more towards the altruistic others-oriented side. A value creation focus could thus be a way to emphasize collective values rather than individualist values if that is deemed desirable. Still, each individual case could be skewed towards either end depending on how it is being implemented by teachers and other key people involved.

7 Implications

The frameworks developed here and the analysis applying these frameworks arguably illustrates that value creation based entrepreneurial education could be analyzed more comprehensively through a deeper understanding of the two terms *value* and *economics*. This article however only scratches the surface of such an analysis, and arguably triggers even more questions than it answers. Further investigation by scholars and practitioners is needed. A few implications for practitioners have nevertheless been articulated in this analysis, such as a difference in cost-benefit ratio between value creation and venture creation, a recommendation to focus on use value rather than exchange value and a preference for value creation over venture creation if one wants to emphasize others-oriented collectivism in educational activity. The analysis has also highlighted the importance of enjoyment value, not only in value creation education but also in venture creation education primarily focused on economic value. A similarity between value creation and venture creation has also been found in the empirical cases, as the two routes seem equally powerful in terms of triggering high levels of student engagement, perceived relevancy and deep learning of both entrepreneurial and more cognitive competencies.

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