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# The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking "What Is to Be Sustained" With "What Is to Be Developed"

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**Informed by the sustainable development and entrepreneurship literatures we offer the following definition: Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society. To illustrate the diversity of potential research avenues that will advance this field, we offer a research agenda derived from an economics, an institutional, and a psychology perspective. We suggest research questions exploring "what is to be sustained" and "what is to be developed" in sustainable entrepreneurship research.**

## Introduction

Sustainable development is perhaps the most prominent topic of our time. Commonplace are reports of ozone depletion, climate change, and destruction of biodiversity that demonstrate the negative and potentially deadly consequences these processes have for living species (e.g., IPCC, 2007; UNEP, 2004). However, scholars have claimed that entrepreneurial action can preserve ecosystems, counteract climate change, reduce environmental degradation and deforestation, improve agricultural practices and freshwater supply, and maintain biodiversity (e.g., Cohen & Winn, 2007; Dean & McMullen, 2007). Moreover, such actions can, particularly in developing countries, enhance education,

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productivity, socioeconomic status, physical health, and self-reliance of individuals and societies (e.g., Wheeler et al., 2005). Last but not least, there are numerous examples of where entrepreneurial action creates economic gains for investors, entrepreneurs, and economies (e.g., Easterly, 2006). Sustainable entrepreneurship research is needed to explore the role of entrepreneurial action as a mechanism for sustaining nature and ecosystems while providing economic and non-economic gains for investors, entrepreneurs, and societies.

An academic field represents a community of scholars with a common research interest defined by an accepted set of assumptions, such as, the aim, central focus, methods of research, and relevant literature streams (Busenitz et al., 2003, pp. 287–288; Ogbor, 2000 Summer et al., 1990). With the field of entrepreneurship still emerging (Busenitz et al.), it is not surprising that we are still unclear on the definition and core assumptions of sustainable entrepreneurship. In this paper it is our purpose to provide some clarity. We offer our framework, not as the fully developed, definitive scope of sustainable entrepreneurship as a field but hopefully an important step in its continued development.

Our framework is more meta-theoretic than theoretical because we propose that scholars from different theoretical perspectives can form part of this scholarly community. Therefore, while we hope to build some consensus around a boundary that distinguishes sustainable entrepreneurship based on coherence between sustainable development and entrepreneurship, we aim to promote scholarly diversity within this boundary (Cannella & Paetzold, 1994). Both are essential for advancing the field. Consensus around a field's definition provides the basis for knowledge integration and accumulation (Kuhn, 1974; Pfeffer, 1993) and the diversity within those bounds allows for comparison across theories (Feyerabend, 1980) to promote imaginative visions (Gould, 1981) and to allow them to be evaluated as part of the continued dialogue in the marketplace of ideas (Cannella & Paetzold). That is, with a clearer definition of the field, the "scene" is set for a more diverse body of theory-based studies that, even where there is little to no overlap in the dependent variables, independent variables, and theory, there is some chance for knowledge accumulation because any study can be "located" within sustainable entrepreneurship (or not). For example, two studies might be explaining different aspects, each driven by its own distinct theoretical roots, but each contributing to the emergence of the field.

Our purpose is not to end with "the" definitive dependent and independent variables, but to allow and promote multiple theoretical perspectives to the field of sustainable entrepreneurship, and embrace the considerable variation in terminology, data, and methods. That is, while some scholars are keen for rapid convergence on these issues in new areas of study, we believe that, at least for the time being, diversity, within a broader framework, is beneficial. We now lay out this broader framework of sustainable entrepreneurship and then offer some diverse suggestions for research within it.

## A Definition of Sustainable Entrepreneurship

The sustainable development literature informs the discussion of sustainability by focusing on what is to be sustained, namely, nature, life support systems, and community (for a review see Parris & Kates, 2003), and what is to be developed, namely, individuals, the economy, and society (see Leiserowitz, Kates, & Parris, 2006; National Research Council, 1999).

## What Is to Be Sustained in Sustainable Entrepreneurship?

***Nature Is to Be Sustained.*** Nature refers to the phenomena of the physical world and includes the *earth*, *biodiversity*, and *ecosystems* (Parris & Kates, 2003) and can have intrinsic value over and above it as simply a life support system (see Muehlebach, 2001). The Global Scenario group emphasized the need to preserve the "beauties of the earth" and similarly others have highlighted the importance of protecting natural resources and open/green space (Boston Indicators Project, 2007). If these are not sustained, the life of many species living on the earth including humans is threatened. For example, the destruction of the ozone layer as part of the earth's atmosphere has led to enhanced exposure of UV irradiation and increased rates of skin cancer (Slaper, Velders, Daniel, de Gruijl, & van der Leun, 1996), and studies have found that exposure to natural green places significantly improves human health (Pretty, Hine, & Peacock, 2006). Nature can be sustained if individuals, organizations, and nations can act in ways to preserve the earth, biodiversity, and ecosystems. Sustainable entrepreneurship research is needed to explore the role of entrepreneurial action as a mechanism for sustaining nature.

***Sources of Life Support Are to Be Sustained.*** Sustaining life support refers to the environment as "a source of resources and services for the utilitarian life support of humankind" (Costanza et al., 1997; Daily, 1997). This life support appears to be sustained through preserving the *environment*, *natural resources*, and *ecosystem services*. If environmental systems are not sustained, life support for humans can be severely threatened. For example, the pollution of water with infectious agents, bacteria, and chemicals causes millions of deaths per year, particularly in third-world countries (Montgomery & Elimelech, 2007). Over the last few decades, many natural resources have been overexploited with a severe impact on the life support for humankind. For example, overexploitation of minerals through mining has made large portions of land uninhabitable (Swanson, 1996), and overfishing of oceans has led to decline of fish stocks and marine biodiversity (Sala & Knowlton, 2006). Declining ecosystem services also have a direct impact on human life support, for example, when the reduced purification capacity of aquatic habitats due to contamination leads to a shortage of drinking water (Zedler & Kercher, 2005), or when erosion of soil diminishes its fertility leading to lower crop yields (Schröter et al., 2005). Sustainable entrepreneurship research may provide a more detailed understanding of entrepreneurial action as a mechanism for sustaining life support.

***Communities Are to Be Sustained.*** Communities refer to a complex web of relationships between a set of individuals who share values, norms, meanings, history, and identity (Etzioni, 1996). What makes communities distinctive (and therefore contribute to identity) is their *culture*, *groups*, and *places*, and to the extent these are threatened, community might be lost. Culture is a central aspect of communities, and it is believed that "human beings have a right to culture—not just any culture, but to their own" (Margalit & Halbertal, 2004). By being able to maintain a culture within the larger society, individuals can secure their personal identity. The loss of cultural identity has been associated with enhanced alcoholism among American Indians (Spicer, 2001), and diminished physical health and life expectancy in Australian Aborigines (McDermott, O'Dea, Rowley, Knight, & Burgess, 1998). Families and other groups also provide a sense of personal identity and are believed to be a basis for a well developed community (Miller, 2001). Studies report that the disintegration of the family means that individuals are less capable of assuming social responsibilities that enhance community development (Stevens, 1994), and that

disruption of families diminishes individual well-being (Forste & Heaton, 2004). Places can serve as important public symbols of culture and history (Borer, 2006) and thereby provide a sense of identity to people's lives (Padua, 2007). However, the efforts of sustaining places are not always successful. For example, tourism is one activity that potentially threatens places, such as the Great Wall of China (du Cros, Bauer, Lo, & Rui, 2005), and air pollutants continue to have pernicious effects on places such as cultural heritage sites in Florence (Monforti, Bellasio, Bianconi, Clai, & Zanini, 2004).

Some recent studies suggest that entrepreneurial action can contribute to sustain communities. For example, Peredo and Chrisman (2006) introduced the concept of community-based enterprise where all individuals forming the community act as an entrepreneur. Since the community-based enterprise is "typically rooted in community culture, natural and social capital are integral and inseparable from economic considerations" (Peredo & Chrisman, p. 309). This concept suggests that, in poor regions of the world, communities acting as entrepreneurs can reduce poverty while maintaining the natural environment. Further, O'Neill, Hershauer, and Golden (2009) described how the Navajo Nation, the largest Native American tribe in the United States, founded an entrepreneurial venture (Navajo FlexCrete) that produces green building products by recycling waste material thereby building economic, social, environmental, and cultural value and contributing to sustain the heritage of the native Navajo tribe. Future sustainable entrepreneurship research may help to better understand the entrepreneurial mechanisms for sustaining communities.

## What Is to Be Developed in Sustainable Entrepreneurship?

While developing economic profit is central to the definition of entrepreneurship (Venkataraman, 1997) and therefore is also part of our definition of sustainable entrepreneurship, the literature on sustainable development suggests that besides economic gains, non-economic outcomes (gains to people and society) are also important development goals (National Research Council, 1999). The emphasis that sustainable entrepreneurs place on the generation of economic vs. non-economic gains likely differs across individuals and organizations. For example, for some sustainable entrepreneurs it may be sufficient to simply ensure the financial viability of their organization, but others may be primarily driven by developing economic profit for themselves.

***Economic Gain.*** An economics perspective emphasizes the development of economic gains for the actor and/or the society. These economic gains are an important development goal. For example, developing economic gains enhances the socioeconomic status of people (Oakes & Rossi, 2003) and leads to improved emotional (Gallo & Matthews, 2003), psychological (Twenge & Campbell, 2002), and physical health (Hanson & Chen, 2007). This effect transcends boundaries of generations since increased socioeconomic status of parents leads to enhanced childhood well-being and their socioeconomic status as adults (Conger & Donnellan, 2007). The subjective well-being (Diener, Diener, & Diener, 1995) and physical health (Knowles & Owen, 1995) of people increases with the economic development of the countries in which they live. The development of these economic gains is likely to be readily accepted as a consequence of entrepreneurship and therefore, when combined with a construct of "what is to be sustained," accepted as sustainable entrepreneurship.

***Non-Economic Gains to Individuals.*** Non-economic gains to be developed in individuals include child survival, life expectancy, education, equity, and equal opportunity

(National Research Council, 1999; Parris & Kates, 2003). Increasing the likelihood that a child will survive to adulthood is a gain that can be developed. For example, in low-income countries one out of every 10 children dies before the age of five and the United Nations aims to reduce this by two thirds (Millennium goals, United Nations). The primary causes of these deaths are pneumonia, diarrhea, malaria, measles, and AIDS (http://www.childinfo.org). Furthermore, some individuals are exploited such that their "true" value is not recognized or rewarded. For example, the central question of stakeholder research seems to be "for whose benefit and at whose expense should the firm be managed?" (Freeman, 1994, p. 67). Research has focused on the means of ensuring that resources are deployed fairly between the firm and its stakeholders. If resource deployment is not fair then a stakeholder is being exploited by the firm.

Studies from the emerging field of social entrepreneurship and the area of corporate social responsibility suggest that entrepreneurs can substantially contribute to the development of non-economic gains to individuals. For instance, Nobel Laurate Mohammad Yunus discovered that very poor people in Bangladesh were exploited by loan providers who charged over 100% interest. The poor people had to accept these conditions because they had to buy bamboo for producing stools and earn their living, and nobody else offered loans. Yunus founded the Grameen Bank, a social enterprise providing the poor with cheaper loans that allowed them to substantially improve their living conditions (Yunus, 2006). Social entrepreneur Victoria Hale, a former research scientist in the biopharmaceutical industry, founded OneWorldHealth, an organization that provides people in poor countries with medical treatment that they could not afford otherwise (Seelos & Mair, 2005). Finally, disadvantaged individuals can profit from innovative and entrepreneurial corporate social responsibility activities. For example, one such corporate social responsibility initiative is the "Ronald McDonald House Charities" founded by McDonalds (McWilliams & Siegel, 2001). Ronald McDonald House Charities is a foundation offering seriously ill children the possibility to stay together with their parents far from home during medical treatment. Sustainable entrepreneurship research may help to better understand the entrepreneurial mechanisms for developing non-economic gains.

***Non-Economic Gains to Society.*** While gains to society include gains for individuals living in that society, they differ from individual gains because the latter may only be available to a few individuals while societal gains are available to all (or the vast majority of ) societal members. For example, societies can gain through the development of "well-being and security of national states, regions and institutions and, more recently, the valued social ties and community organizations" (National Research Council, 1999, p. 25). The well-being of nations and regions refers to the life satisfaction and happiness of their inhabitants (Diener et al., 1995; Vemuri & Costanza, 2006), and security denotes both protection against threats from outside, e.g., by other nations (e.g., Steinbruner, 1978), and threats from inside, e.g., through economic (Parkhe, 1992) or environmental (Porter, 1995) decline. Moreover, societies can gain if social ties and interpersonal relationships between individuals are developed. Weak social norms, low interpersonal trust, corruption, and violence are more common in poor nations and regions with lower levels of human well-being (Narayan & Petesch, 2002) and represent obstacles for societal development (Easterly, 2006).

Research on social entrepreneurship and corporate social responsibility highlights the important role of entrepreneurs in developing non-economic gains to society. For instance, social entrepreneur Ibrahim Abouleish founded the Sekem Initiative. While it is a

multi-national social enterprise today, Sekem started out by growing organic herbs for medical application in poor regions of Egypt. The success of the initiative not only created jobs for local inhabitants, but also improved the social structure and trust in the society thereby helping people to escape the poverty trap and gain control over their lives. Through application of organic agriculture techniques, Sekem also contributed toward maintaining the regional natural environment (Seelos & Mair, 2005). Burton and Goldsby (2009) emphasized that entrepreneurs and small business owners are less profit-driven than shareholders of publicly held large organizations providing the entrepreneurs the freedom to act in a socially responsible manner. For example, they can contribute to the development of local societies by keeping employment in their regions instead of moving to cheaper production sites. Sustainable entrepreneurship research may increase our understanding of how and why entrepreneurial action can generate gains for society.

## What Is Sustainable Entrepreneurship?

Above we have defined "constructs to be developed" and "constructs to be sustained." Linking the two is entrepreneurial action. The entrepreneurship literature informs the discussion on entrepreneurial action—Venkataraman (1997) defined entrepreneurship as a scholarly field that "seeks to understand how opportunities to bring into existence future goods and services are discovered, created and exploited, by whom and with what consequences" (p. 120). Building on the shared research interests of a community of scholars interested in sustainable entrepreneurship and informed by the sustainable development and entrepreneurship literatures we offer the following definition:

> Sustainable entrepreneurship *is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society*.

## What "Sustainable Entrepreneurship" Is Not

If a term captures everything then it represents nothing. In this section we highlight research that is likely very worthwhile but does not fit within our proposed definition of sustainable entrepreneurship. These examples help delineate the boundaries of the field. First, research that investigates what is to be sustained without simultaneously considering what is to be developed is not sustainable entrepreneurship research. For example, research on sustainability issues such as climate change, that documents a significant change in global temperatures over the last decade, is important but because it does not consider the development of people, economy, or society, it is not sustainable entrepreneurship research. Second, research that investigates development without simultaneously considering what is being sustained is not sustainable entrepreneurship research. For example, research focused exclusively on child survival by the creation of a new antibody for inoculation is very important research but not sustainable entrepreneurship research. Third, research that simultaneously considers what is being sustained and what is being developed but the link between the two does not involve the discovery, creation, or exploitation of future goods, processes, or services may be considered as sustainable development research, but is not sustainable entrepreneurship. For example, some government funding or efforts of non-profit organizations may enhance sustainability of biodiversity and simultaneously develop people through education yet does so through actions that are not entrepreneurial. Again, these are worthwhile topics for research but

are not studies of sustainable entrepreneurship. Finally, entrepreneurship research that focuses exclusively on the economic outcomes of entrepreneurial action (individuals, firms, and/or society) and do not also simultaneously consider sustainability outcomes cannot be considered sustainable entrepreneurship research.

## "Sustainable Entrepreneurship" and Related Concepts

While our definition of sustainable entrepreneurship excludes the research streams mentioned above, it also overlaps with and/or includes other research streams. First, our definition embraces studies on *Ecopreneurship* (Environmental Entrepreneurship). This literature tries to understand how entrepreneurial action can contribute to preserving the natural environment including the earth, biodiversity, and ecosystems (see, e.g., Pastakia, 1998; Schaper, 2005). Ecopreneurship is therefore part of sustainable entrepreneurship but it is not synonymous because it does not explicitly cover, for example, sustaining communities, and the development of non-economic gains for individuals and societies. Second, our definition of sustainable entrepreneurship overlaps with the concept of *Social Entrepreneurship* which "encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner" (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). Thus, research on social entrepreneurship investigates the development of (non-economic) gains for individuals or societies, but it does not include sustaining current states of nature, sources of life support, and community. Finally, sustainable entrepreneurship may also include aspects of *Corporate Social Responsibility*, which refers to actions that appear to further some social good, beyond the interests of the firm and that which is required by law (McWilliams & Siegel, 2001). However, corporate social responsibility is not necessarily linked to entrepreneurial action and innovation but often denotes societal engagement of organizations (e.g., funding a sports club or donations to social organizations).

## Developing the Field of Sustainable Entrepreneurship

A clearer definition of sustainable entrepreneurship provides a basis for exploring where and how future research can make a contribution to the development of the field. As previously discussed, our definition offers a meta-theoretic framework within which a diversity of disciplines and theories can be used and developed to continue the emergence of the field of sustainable entrepreneurship. To illustrate this diversity and the resulting questions, we offer three examples of theoretical perspectives—economics, institutional theory, and psychology. We do not exclude research from other disciplines—such as anthropology, physical sciences, and engineering—from also being a source for generating and addressing research questions of interest to sustainable entrepreneurship. Indeed, we encourage such diversity. We simply chose these three disciplines because they are the most commonly represented in the entrepreneurship literature. Therefore, they may provide the most immediate opportunities to extend work on entrepreneurial action to contribute to the field of sustainable entrepreneurship. Additionally, these disciplines illustrate future research in sustainable entrepreneurship at different levels of analysis. For example, an economics perspective mostly focuses at the level of economy and organizations (and sometimes on the individual), the

institutional perspective emphasizes the level of institutions, and the psychology literature takes predominantly an individual perspective. However, based on a theoretical approach there are also possibilities for multi-level studies within sustainable entrepreneurship.

There is also considerable overlap between research questions that are relevant to the different disciplines. There are benefits to the same research questions being pursued from a different discipline perspective. For example, they may provide a similar explanation of the phenomenon, which increases the robustness of the results and our confidence in the knowledge accumulation process; they may provide different explanations for the same research question and shed new but different light on the phenomenon and highlighting additional research opportunities to reconcile these "conflicting findings"; they provide (whether explanations are consistent or inconsistent) a basis for cross discipline exchange—at least they agree on the importance of the research question.

It would be an impossible task to offer a review of all the literatures within each of these disciplines and the research questions they generate. We do not even attempt it. Our approach below is to offer a subjective interpretation of the major trends that can advance our understanding of sustainable entrepreneurship. Based on these major trends, we illustrate a sample of the many possible research questions that we believe are likely to make an important impact on our understanding of sustainable development. We hope that readers find our research questions interesting but we also hope (expect) that readers see a whole host of different research questions. We want to stimulate, rather than constrain, the diversity of research questions within the broader sustainable entrepreneurship framework.

## An Economics Perspective and Future Research on Sustainable Entrepreneurship

In a recent paper on sustainable entrepreneurship, Cohen and Winn (2007) focused on the economic and environmental components of sustainability. Specifically, the existence of pervasive natural-environment-related market imperfections generates numerous entrepreneurial opportunities that, when exploited, provide rents (economic profits) to the entrepreneurs. Presumably, this entrepreneurial action reduces the pervasiveness of natural-environment-related market imperfections helping to "sustain" the natural environment. The entrepreneurial mechanism is "the process of discovering, evaluating and exploiting economic opportunities that are present in *market failures* which detract from sustainability including those that are environmentally relevant" (Dean & McMullen, 2007, p. 58). Market failure refers to the failure to realize all possible gains through trade (Zerbe & McCurdy, 2000). An economics perspective is about achieving efficiency: "entrepreneurial action can overcome barriers to the efficient functioning of markets to contribute to the more efficient use of environmental and natural resources and the development of a more ecological sustainable economy" (Dean & McMullen, p. 69). Entrepreneurs are motivated by the personal gain of profit and their actions return market efficiency.

There are numerous opportunities for further research from an economics perspective through a more fine-grained treatment of what is to be sustained, a broader consideration of what is to be developed, a deeper analysis of one or more key entrepreneurial mechanisms, and possibly by building on alternate economic theories. Each is now discussed.

## What Is to Be Sustained?

Sustainable entrepreneurship can benefit from economic research that explores the multiple market impact of the entrepreneurial action on the dimensions of the environment.[1]

***Markets for the Life Support Provided By the Environment.*** It appears that considerable progress has been made in understanding the market for natural resources—renewable and non-renewable resources that are found in nature and useful for humans such as, for example, minerals, fossil oil and gas, fertile soil, rivers and fisheries, and woodlands and tropical forests (Swanson, 1996). What are the markets (or market failures) for other dimensions of the natural environment that also need preserving? Health economics likely informs future research into this question. For example, the Environmental Sustainability Index emphasizes the importance that "vital environmental systems are maintained at healthy levels, and to the extent to which levels are improving rather than deteriorating" [and] "levels of anthropogenic stress are low enough to engender no demonstrable harm to its environmental systems" (Esty, Levy, Srebotnjak, & de Sherbinin, 2005, p. 11). If environmental systems are not sustained, life support for humans can be severely threatened. For example, pollution of air leads to psychological (Downey & van Willigen, 2005) and physical (Smith & Ezzati, 2005) health problems that cost the U.S. health care system several billion U.S.$ a year (Marris, 2006).

Similarly, what is market failure of ecosystem services—"components of nature directly enjoyed, consumed or used to yield human well-being" (Boyd & Banzhaf, 2007, p. 619)? Future research may build on an ecological economics perspective that suggests that the notion of the life support and preserving ecosystem services is reflected in the wellbeing index (Vemuri & Costanza, 2006)—"a condition in which the ecosystem maintains its diversity and quality—and thus its capacity to support people and the rest of life—and its potential to adapt to change and provide a wide range of choices and opportunities for the future" (Parris & Kates, 2003, p. 567). Declining ecosystem services have a direct impact on human life support, for example, when the reduced purification capacity of aquatic habitats due to contamination leads to a shortage of drinking water (Zedler & Kercher, 2005), or when erosion of soil diminishes its fertility leading to lower crop yields (Schröter et al., 2005). In economic terms, the value of global ecosystem services has been estimated to average about U.S.$33 trillion annually (Costanza et al., 1997). What is the nature of the market failure that has caused the degradation of these ecosystems and how can entrepreneurial action help to overcome it? Scholars may use available measures for ecosystem and natural capital valuations to address this question (Costanza & Folke, 1997; Vemuri & Costanza).

***Markets for the Intrinsic Value of the Environment.*** The natural environment has an intrinsic value over and above simply as a life support system (Muehlebach, 2001). How does the degradation of that intrinsic value equate to a market failure and thus an entrepreneurial opportunity? Recent research on eco-tourism is an example of future research from an economic perspective that can inform and advance the field of sustainable entrepreneurship. Eco-tourism provides individuals the opportunity to experience the

1. We acknowledge that there is also a "recursive relationship" between entrepreneurship and the environment because some entrepreneurs have contributed to diminish environmental conditions, for example by emitting environmentally harmful substances in order to reduce their production costs. These are not sustainable entrepreneurs since sustainable entrepreneurship refers to the improvement or preservation of the natural environment.

natural environment and satisfy their intrinsic motivation. This provides resources and incentives to sustain that natural environment yet the more successful the tourism strategy the more tourists and the greater the threat to that environment (e.g., du Cros et al., 2005). What strategies are used to determine and maintain such a balance?

***Economics and Sustaining Communities.*** Although economics does not traditionally focus on the community-related attributes of culture, people, and places, there is an opportunity to extend the notions of market failure to the threat to community. For example, can cultures be sustained by providing certain communities excludability for public environmental resources? Perhaps providing Inuits property rights over whaling and walrus tusks help to sustain their culture. Is culture itself an entrepreneurial mechanism that can reduce the transaction costs that are associated with environmentally relevant externalities? Using common measures of culture and cultural values (e.g., Hofstede, 2001; Schwartz, 1999) and capturing how they change over time can be an approach to investigating the impact of entrepreneurial action on the "sustainability" of communities.

A health economics perspective views each individual as possessing a stock of health "capital" that depreciates over his or her lifetime with the rate of depreciation depending on a number of factors such as medical care consumed, environmental factors, and lifestyle (Folland, Goodman, & Stano, 2001). Organizations that influence these factors include governments (through developing institutions for health care development), public and private health insurance companies, physicians, hospitals, and the pharmaceutical industry (Santerre & Neun, 1996). Perhaps entrepreneurial action diminishes the rate at which others' stock of health "capital" depreciates over their lifetime. Entrepreneurial action has resulted in new products and services that enhance people's health and these have been well-documented by research on biotechnology and pharmaceutical industries (e.g., Rothaermel & Deeds, 2004). The field of sustainable development has the opportunity to enhance our understanding of the role that entrepreneurial action that sustains the environment also has on preserving communities. For example, how do the entrepreneurial actions that preserve the environment's ecosystems slow the rate at which a community's health stock is diminished and what is the impact of this diminished rate of decline on the individual and society? Research at the intersection of health economics and indigenous entrepreneurship could help address this question, for example by drawing on existing measures of health capital (Gerdtham, Johannesson, Lundberg, & Isacson, 1999), and in doing so make an important contribution to the field of sustainable entrepreneurship.

It appears that there are multiple dimensions of the environment and community to be preserved. An economics perspective can inform our understanding of their degradation through market failure and their preservation through entrepreneurial action to eliminate the market failure. It is interesting to broaden the research focus to include one or more dimensions of the environment simultaneously. Are these different market failures related? It is possible that overcoming the obstacles of one market failure can help to overcome the obstacles of another market failure and thereby sustain multiple dimensions of the environment. However, it is also possible that overcoming the obstacles of market failure to preserve one aspect of the environment can lead to the creation of a market failure that degrades other aspects of the environment. There might also be trade-offs between sustaining the environment and communities. For example, overcoming the obstacles of market failure to preserve one community may lead to the creation of a market failure that degrades an aspect of the environment or degrades another community. These are important sustainable entrepreneurship issues that can be addressed by future research from an economics perspective.

## What Is to Be Developed?

The current economics perspective of sustainable entrepreneurship has focused on the profit to be achieved by an entrepreneur as the outcome to be developed. There is more work that can be done in this field of study. Similarly, drawing on development economics has the potential to advance the sustainable entrepreneurship field. Development economics investigates the factors that promote and constrain economic development in low-income countries including the relationship of those countries with high-income countries (Gilles, Perkins, Roemer, & Snodgrass, 1996). Research on the development of third and fourth world countries focused on corporate social responsibility (Amba-Rao, 1993), but such an approach underplays the mechanism of entrepreneurship (Prahalad, 2007). Prahalad highlighted the role of multi-national organizations' entrepreneurial actions on the lives and economies of those at the bottom of the pyramid (citizens of developing economies) as a means of enhancing firm profitability. More fine-grained research can investigate how, when, and why the entrepreneurial actions of multi-nationals enhance corporate profits by improving the lives of those at the bottom of the pyramid.

As implied above, the economic gains may accrue to others and not necessarily solely to the entrepreneur (entrepreneurial firm). These economic gains for others may be sufficient for an entrepreneur to act (regardless of his or her expectation of personal gain). Although an economics perspective has little to add to our knowledge of an entrepreneur's motivation—over and above personal profit—it does provide some insights into the broader economic implications of those actions for others.

***Economic Development of Others.*** "What is being developed" can include the economic development of people (other than the entrepreneur). This broader conceptualization of whose economy is developed in overcoming market failures that degrade sustainability introduces a number of interesting avenues for future research. Under what conditions are the economic gains of the entrepreneurial environment matched or exceeded by the economic losses of groups within society or society as a whole? Perhaps the "development" aspect of sustainable entrepreneurship depends on whose perspective is taken and/or the level of analysis used. The inter-relationship between these different dimensions of whose economy is being developed is an important line of future research for sustainable entrepreneurship well suited for an economics perspective.

For example, regional economics focuses on the analysis of spatial distribution of economic activities and the geographic factors that influence economic development (e.g., Porter, 2000; Sato & Yamamoto, 2005). Regional economics provides theories and empirical tools to investigate development gains at a level other than the individual or organization. Building on regional economics, sustainable entrepreneurship research can investigate the gains to a region from entrepreneurial actions that preserve the natural environment and/or communities. For example, there may be a positive economic impact for a region in which a firm develops an environmentally friendly technology that also offers superior profits to the firm. Who else benefits from this success and in what ways? Knowledge may "spill over" from the innovative firm to others located nearby. What are the regional conditions necessary to foster a cluster of highly innovative environmentally focused firms? These conditions may differ from the conditions for clusters of innovative firms in technologies that are environmentally neutral or unfriendly. Sustainable entrepreneurship scholars can build on regional economics to address some of these interesting issues.

***Non-Economic Development.*** Although an economics perspective focuses on the economic consequences of entrepreneurial action, this line of research can be extended to consider some of the non-economic developments that occur as a result of these economic consequences. These non-economic gains are measurable, for instance by using the Human Development Index (HDI) of the United Nations that is comprised of a longevity index, an education index, and a standard of living index (UNDP, 1998). Moreover, considerable research demonstrates a positive impact of socioeconomic status on emotional (Gallo & Matthews, 2003), psychological (Twenge & Campbell, 2002), and physical health (Hanson & Chen, 2007) of people. Further, parental socioeconomic status is associated with a host of indicators of childhood well-being and their socioeconomic status as adults (for a review see Conger & Donnellan, 2007). How does the discovery, evaluation, and exploitation of economic opportunities arising from market failures that detract from sustainability impact the socioeconomic status of the entrepreneur, the entrepreneur's family, local economy, and so on? Without considering the non-economic benefits arising from socio economic status, the impact of sustainable entrepreneurial action is likely understated.

In sum, an economics perspective offers an approach to enhance our understanding of sustainable entrepreneurship at the level of the individual (e.g., focusing on economic gains for individual sustainable entrepreneurs), the organization (e.g., focusing on organizations' profit from exploiting sustainable development opportunities), and the economy (e.g., focusing on how sustainable entrepreneurship can contribute to the economic and non-economic development of nations and regions). Further, some of the research questions offered include multiple levels of analysis and may bridge those levels (e.g., focusing on how sustainable entrepreneurial action by organizations conjointly influence regional economic and non-economic development). These multi-level studies may be particular beneficial to our understanding of sustainable entrepreneurship.

## An Institutional Perspective and Future Research on Sustainable Entrepreneurship

Institutional (and neo-institutional) theories primarily have been used to investigate sustainability.[2] For example, Hoffman (1999) in a study of the U.S. chemical industry found that as an organizational field around corporate environmentalism changed over time so too did the institutions adopted by the industry to interpret corporate environmentalism. An institutional entrepreneur is an actor that has an interest in developing new institutions or facilitating change in existing institutions (replacing the old with the new), and leverages resources to achieve this change (Fligstein, 1997). Institutional entrepreneurs "lead efforts to identify political opportunities, frame issues and problems, and mobilize constituencies" (Rao, Morrill, & Zald, 2000, p. 240). Several ways exist by which entrepreneurs can influence institutional changes (Hillman & Hitt, 1999). For example, institutional entrepreneurs can (1) provide political decision makers with information through lobbying, commissioning of research projects, or providing technical reports; (2) provide them with financial incentives through contributions to parties, paid travel, or honoraria for speeches; or (3) influence them indirectly through public relations,

2. We acknowledge that the institutional perspective is sometimes included in an economics perspective (and sometimes also in a sociological perspective). In this article we treat it separately because it offers considerable insights into a number of important issues related to sustainable entrepreneurship.

press conferences, or political education programs. These measures can either be targeted to implement one specific institutional change, or serve as a long-term strategy to gain and maintain political influence (Hillman & Hitt).

The actions described above appear to be a powerful mechanism for institutional entrepreneurs in the context of bringing into existence future institutions (processes) that both sustain and develop. For example, powerful environmental organizations hold conferences where they present research supportive of environmental issues (Sayers, 2002) thereby influencing public opinion and election outcomes. Moreover, large organizations such as Greenpeace, the WWF, or Friends of Earth (FoE) are known to engage in political networks and lobbying in order to introduce institutional reform supportive of sustainable development goals (Rootes, 2006). Finally, Child, Lu, and Tsai (2007) described how institutional entrepreneurs such as governmental agencies and the State Council promoted the development of China's Environmental Protection System between 1972 and 2001 by inducing international exchange on environmental issues, building public awareness of these issues, and diffusing values on environmental protection. The focus on the mechanism of inducing change has provided ample room for future research to explore the implications of institutional entrepreneurs for what is sustained and what is developed.

## What Is to Be Sustained?

***Environment-Friendly Institutions.*** The issue of what is to be sustained is socially constructed and reflects (and is reflected in) the institutions adopted to interpret the sustainability issue. Competing institutions may exist between one that (likely indirectly) promotes environmental degradation and one that promotes environmental preservation. The role of the institutional entrepreneur in sustainable entrepreneurship is to make the environmental preservation institution the dominant one. Institutional theory is well equipped to explain this process. However, from a sustainable entrepreneurship perspective the issue becomes more complicated (and perhaps more interesting) when the competing institutions both form around sustainability issues but around different dimensions of sustainability. That is, rather than sustainability as a monolith, it represents numerous (and perhaps) independent sub-issues. One institution interprets corporate environmentalism, for example, in terms of sustaining those sources of resources and service for the utilitarian life support of people, and for the other institution the issue relates to sustaining the natural environment for its intrinsic value (regardless of whether they are a life support system or not). Assuming each generates some developmental gains, future research on sustainable entrepreneurship can explore the creation, evolution, and competition of these different sustainability institutions. For example, how can entrepreneurs change and "integrate" institutions in a way that several sustainability dimensions can be pursued in parallel or in concert?

***Community-Based Institutions.*** Sustainability is broader than the natural environment and includes preserving communities. The importance of developing appropriate and stable institutions for the well-being of societies has often been emphasized, including formal (political and legal frameworks) and informal (e.g., social values) institutions (North, 1990). For example, strengthening the institutions of democracy (Diener & Seligmann, 2003) and human rights (Diener et al., 1995) have been found to enhance national well-being. Further, the development of a legal framework that sustains the natural environment may contribute to community well-being (Vemuri & Costanza, 2006). Entrepreneurial action may also cause informal institutional changes that provide

developmental gains for others and for societies. For example, the National Organization for Rare Disorders (NORD) was founded by patients with rare disorders and their families and achieved the introduction of the Orphan Drug Act, a legal framework that provides incentives for pharmaceutical companies to develop drugs for rare disorders (Austin, Stevenson, & Wei-Skillern, 2006). NORD can be considered an institutional entrepreneur in that the group was able to change a formal institution (laws) to provide non-economic benefits for others.

***Institutional Trade-offs.*** A more nuanced view may explore competing institutions on sustaining the natural environment and sustaining communities. For example, the culture and identity of Inuits involves hunting and killing whales. We normally think of the trade-off between sustainability and development but in this case the trade-off might exist between the different dimensions of sustainability. An interesting possibility is that what is being sustained—the community—is also the institution and this institution offers the entrepreneurial mechanism for development and preservation of the community. For example, Peredo and Chrisman (2006, p. 310) developed the concept of a community-based enterprise, that is, a community that "acts entrepreneurially to create and operate a new enterprise embedded in its social structure." These enterprises "are managed and governed to pursue the economic and social goals of a community in a manner that is meant to yield sustainable individual and group benefits over the short and long term." What are the simultaneous implications of an institutional entrepreneur on multiple dimensions of sustainability?

## What Is to Be Developed?

From an institutional perspective what is developed is the institution that provides power (status), influence, and legitimacy. This has a number of implications for sustainable entrepreneurship research. Indeed, these institutional outcomes provide the means of achieving a host of development ends.

***Economic Benefits.*** The literature on institutional change indicates that the development of appropriate institutions can significantly improve the economic well-being of individuals, organizations, and nations. For example, successful institutional reform in poor countries has reduced national budget deficits and inflation (Ho & Schneider, 2002) and triggered economic growth (Fan & Pardey, 1997). Further, the development of legitimacy has been associated with the economic benefits of organizations (Zimmerman & Zeitz, 2002), industries (Deeds, Mang, & Frandsen, 2004), and nations (Kalantaridis, 2007). It has also been found that a change in values as informal institutions can trigger the economic development of nations (Inglehardt, 1995). Institutional entrepreneurs inducing such change stand to benefit economically from their actions and those benefits can be shared (directly or indirectly, economic and/or non-economic gains) broadly. For instance, institutional entrepreneurs may push the development of environmental regulations that benefit their environmentally friendly business and create employment in the region (Dean & McMullen, 2007). What institutional changes are beneficial for sustainable entrepreneurial action developing economic gains, and how can entrepreneurs effectively and efficiently achieve these changes?

***Non-Economic Gains for Others.*** Institutional outcomes provide the means by which non-economic gains can be achieved for society (National Research Council, 1999). For example, institutional reforms can benefit societies by enhancing the security of national

states and regions by protecting them against threats arising from economic (Parkhe, 1992) or environmental (Porter, 1995) decline. Moreover, developing institutions such as human and democratic rights can increase the well-being of their inhabitants (Diener et al., 1995; Diener & Seligmann, 2003). Changing institutions can also enhance a society's human and social capital, for example through delivering education in third-world countries (see Easterly, 2006) and providing a mechanism that links third-world nations and large companies to deliver medicine to the poor (Seelos & Mair, 2005). Finally, societies can gain when new institutions facilitate the development of social ties and interpersonal relationships. For example, founding a fair trade organization for agricultural products in developing countries can both develop the economic wealth of these societies and also create more solidarity among members developing trust in the trade organizations (Pirotte, Pleyers, & Poncelet, 2006). These institutional reforms can be attributed to the actions of individuals and/or organizations. Sustainable entrepreneurship research can make important contributions when it uses, for example, measures of national well-being (Diener et al., 1995), education and health (UNDP, 1998), and social well-being (Wickrama & Mulford, 1996) as dependent variables representing non-economic gains, and explores which institutional changes maximize these gains.

For example, the literature on social movements could inform sustainable entrepreneurship research. A social movement refers to "an action system comprised of mobilized networks of individuals, groups and organizations which, based on a shared collective identity, attempt to achieve or prevent social change, predominantly by means of collective protest" (Rucht, 1999, p. 207). These social movements can lead to institutional change processes such as through the enactment of new laws and regulations, the introduction of new technological standards, or the development of new organizing forms and resource deployments (Hargrave & Van de Ven, 2006). What role do social movements have in providing the direction, motivation, and/or resources for the discovery or creation of products, processes, or services that both sustain and develop? A social movement might also be representative of an environmental change that signals an opportunity to entrepreneurs. Alternatively, or in addition, entrepreneurial actions give momentum to social movements, for example provide a technology that exceeds anti-pollution standards strengthening a social movement's call for regulation to raise standards. Can entrepreneurial actions sufficiently satisfy the preservation mission of a social movement (while also providing developmental gains) such that the social movement dies? Investigations of the relationship between social movements and entrepreneurial action are likely to make a contribution to sustainable entrepreneurship.

In sum, the role of institutional entrepreneurs in changing institutions is an important mechanism for explaining a movement towards more sustainable development. Over and above changing the regulative, normative, and cognitive aspects of an institution, future sustainable entrepreneurship research has the opportunity to explore how institutional entrepreneurs can change the institutional forces that shape individuals' identities, schemas, and practices towards sustainable development.

## A Psychological Perspective and Future Research on Sustainable Entrepreneurship

From the psychological perspective, an entrepreneurial mechanism is intentional behavior—entrepreneurial action. There is a substantial literature in entrepreneurial cognition (Mitchell et al., 2002), the decision making of entrepreneurs (Choi & Shepherd, 2004; Forbes, 2005; Parker, 2006), entrepreneurial motivation (Baum & Locke, 2004;

Shane, Locke, & Collins, 2003), and a growing literature on entrepreneurial passion (e.g., Cardon, Zietsma, Saparito, Matherne, & Davis, 2005) that informs our understanding of why some individuals act entrepreneurially while others do not. To discuss the role of entrepreneurship in linking preservation to development (necessary for sustainable entrepreneurship), we rely on the McMullen and Shepherd (2006) framework on entrepreneurial action. We choose this framework because it is at the individual level of analysis, is sufficiently broad to accommodate most individual-level perspectives, and remains consistent with system-level approaches such as the economic and sociological perspectives.

From an environmental signal of an opportunity to entrepreneurial action can be broadly construed to occur in two stages—in the first stage individuals overcome ignorance to believe that there is an opportunity for someone (third-person opportunity belief ) and in the second stage overcome doubt to form the belief that this represents an opportunity for them personally (first-person opportunity belief ) (McMullen & Shepherd, 2006; Shepherd, McMullen, & Jennings, 2007). Both stages are influenced by the conjoint influence of the individual's knowledge and motivation. This framework provides the basis for offering some promising avenues for sustainable entrepreneurship research. Again, we wish to point out that our offerings are a very small sub-set of all possibilities. Our purpose is to simply offer questions that we believe are highly important, rather than an exhaustive set of questions and issues.

## Detecting a Third-Person Opportunity That Both Sustains and Develops

***Feasibility.*** Changes in the business environment are often a source of opportunities. Changes in the environment that may signal an opportunity are changes in technology (Shane, 2000) and/or changes in the market (Dew, Sarasvathy, & Venkataraman, 2004). This emphasis on supply (technology) or demand (the market) reflects an underlying economics perspective of the importance (perhaps exclusively) of economic gain. But do entrepreneurs that form an opportunity belief that promotes both sustainability and development attend to different aspects of the environment than entrepreneurs who form opportunity beliefs concerned solely (or mostly) with economic gain? For example, individuals who attend to the natural environment are more likely to detect changes in that environment and subsequently form opportunity beliefs that both preserve that environment and offer developments than individuals whose attention is more focused on the immediate business environment (the market, technologies, etc.). So those individuals that attend to the natural environment or the social environment (such as communities) are more likely to form beliefs in opportunities for sustainable development, even though they may form the belief that they are not sufficiently knowledgeable to personally pursue this opportunity. But we do not have a good understanding of why some individuals' attention may be more focused on the natural and/or social environment. Attention is often directed to aspects of the environment based on the individual's prior knowledge (Rensink, 2002) and motivation (Tomporowski & Tinsley, 1996). Future research needs to investigate the forms of prior knowledge and motivation that focus individuals' attention more on the natural or social environment.

Perhaps those with an education in forestry, oceanography, and tourism are more likely to form a third-person opportunity belief in an opportunity that sustains and develops than those educated in economics, business, and mechanical engineering. Do those individuals educated in forestry, oceanography, and tourism form different third-person opportunity beliefs than those educated in anthropology, sociology, and social work? It is likely that the former discover or create third-person opportunities that both

preserve the natural environment and offer development gains and the latter discover or create third-person opportunities that both preserve communities and offer developmental gains. Of course, prior knowledge is gained from sources other than education. Future research can explore the types and mixes of prior knowledge that allow some people to discover third-person opportunities that sustain and develop while others are unable to do so.

For example, research drawing on the creativity literature will likely inform the detection of third-person opportunities that both sustain and develop. Creativity refers to the development of original ideas that are useful or influential (Paulus & Nijstad, 2003). Creative individuals are more flexible and adapt better in changing environments, which results in improved physical and psychological health and human functioning (Runco, 2004). For societies, creativity is important to promote technological advance, social sciences, humanities, and arts (Runco). Creativity is facilitated when individuals are granted freedom, autonomy, role models, and availability of resources, and diminished by inappropriate norms, a lack of respect, and unrealistic expectations (Runco). Since entrepreneurship is about the introduction of new and often original products, processes, and services, researchers have emphasized the important role creativity plays in the entrepreneurial process (Gilad, 1984; Ward, 2004). What is different about the creativity process when it must consider simultaneously two outcomes—sustainability and development? This could diminish creativity by placing an additional constraint on how the outcomes of the process are going to be assessed. However, it may enhance creativity by allowing its outcomes to be more broadly construed. For example, perhaps creativity is enhanced when the outcome does not need to be assessed solely in terms of whether it provides an economic gain but could involve a non-economic gain, or gains to others, or gains for society. Perhaps the requirements for preserving nature or a community could be a tool that helps to generate innovative ideas for economic development. The creativity literature offers a rich arsenal of methodological approaches to assess creativity at the individual level (e.g., the creative personality scale, Gough & Heilbrun, 1980) and its impact on the social environment (Paulus & Nijstad), which may help scholars to address these issues. Moreover, this literature frequently draws on case studies of creative individuals (see Runco, p. 676 for examples), and perhaps case studies of creative sustainable entrepreneurs can help to build theories that inform the field of sustainable entrepreneurship.

***Motivation.*** Motivation also directs focused attention. What aspects of an individual's motivation have the effect of directing their attention to the natural and/or social as well as the economic (market and technological) environment? Perhaps individuals born and raised in environmentally conscious regions (Eugene, Oregon; Munich, Germany; or Tasmania, Australia) are more aware of the state of the natural environment (have some attention focused [continuous or periodic] on the natural environment) and thus are more likely to detect changes that signal a third-person opportunity that preserves the environment (and provides gains) than individuals born and raised in other locations.

Similarly, are individuals raised in minority communities more likely to form a third-person opportunity belief that preserves the community (and provides gains) than individuals raised as part of a majority community? Research on ethnic entrepreneurship emphasizes the important role of entrepreneurship as a career choice in ethnic minority communities and the role of ethnicity in attending to opportunities to sustain community structure. For example, Johnson, Munoz and Alon (2007) found that minority entrepreneurs mainly attend to opportunities for establishing businesses that serve their own community, but less so for businesses that include or serve others. Further, ethnic entrepreneurs tend to focus on opportunities that create employment options for those of

their own ethnicity rather than outsiders (Radaev, 1994) thereby protecting community members from poverty, and some ethnic entrepreneurs explicitly seek entrepreneurial opportunities that allow them to preserve their culture and tradition (Masurel, Nijkamp, Tastan, & Vindigni, 2002). Finally, Morris, Schindehutte, and Lesser (2002) stated that especially in an environment of unemployment and discrimination, ethnic entrepreneurs often attend to opportunities that create social mobility for co-ethnics. It appears that investigating the motivation to sustain communities in an ethnic entrepreneurship context can provide a variety of interesting insights into the formation of third-person opportunity beliefs that sustainable entrepreneurial opportunities exist.

## Forming a First-Person Opportunity That Both Sustains and Develops

Given the formation of a third-person opportunity belief that sustains and develops, why do some individuals act on this opportunity while others do not? Individuals are more likely to act entrepreneurially when they perceive to do so is both feasible and desirable (Krueger, 1993).

***Feasibility.*** The assessment of one's knowledge, skills, and abilities to exploit an opportunity could be different for opportunities that are to sustain and develop than those simply for personal economic gain. It could be that the knowledge requirements (hurdle) is higher for the former than the latter—it not only requires knowledge of the industry (competitors) and the market for economic gain but also knowledge, skills, and abilities to preserve the natural and/or social environment. Over and above achieving economic gain for oneself, what are the knowledge, skills, and abilities required to enhance the feasibility of the sustainability dimension of an opportunity and do these differ across the different dimensions of sustainability? Financial resources are often part of an entrepreneur's assessment of whether an opportunity is feasible. Perhaps the process of raising capital for opportunity exploitation is different for those opportunities to both sustain and develop than those that simply provide personal gain. Do financiers use different decision policies, and do entrepreneurs "pitch" the proposal differently? It could be there are different sources of funding for opportunities that both sustain and develop. There is much sustainable entrepreneurship research to do on the feasibility assessment of such opportunities.

***Desirability.*** Concomitantly, individuals assess the desirability of acting on a third-person opportunity belief. In what way are the motivations to act on an opportunity to sustain and develop different from an opportunity for personal gain? Such an explanation could involve a deeper understanding of the intrinsic motivations to preserve nature, life-supporting natural resources, and/or communities. What are the motivations to provide gains for others? Answering such questions likely gives rise to a stream of research that can explore the fine-grained trade-offs between preservation and personal financial gain, personal financial gain and personal nonfinancial gains, personal financial gain and others' developmental gains, and perhaps even the trade-off between preserving different aspect of the environment.

In this regard, recent research on passion (Cardon et al., 2005; Murnieks, 2007) may be particularly useful in exploring differences across individuals in assessing the desirability of acting on an opportunity that both sustains and develops. This will require a nuanced view of passion because it has two targeted outcomes—preservation and development. For example, entrepreneurial passion based on identity (Murnieks, 2007) may be able to explore the role and inter-relationship between an entrepreneurs' micro-identities (Shepherd & Haynie, 2009) in assessing the trade-offs between

identifying with the micro-identity of capitalist, environmentalist, and community builder. Similarly, research on attitudes, values, compassion, and other emotions represent literatures that could form the basis of theoretical and empirical work to advance sustainable entrepreneurship.

For example, the psychological literature on values emphasizes that values of individuals are an important driver of their behaviors and occupational choices (e.g., Judge & Bretz, 1992; Verplanken & Holland, 2002) and there are scales for measuring individual attitudes and values towards environmental preservation (e.g., Dunlap & Van Liere, 1978; Shepherd, Kuskova, & Patzelt, 2009; Stern, Dietz, & Kalof, 1993). Values denote beliefs pertaining to desirable end states or modes of conduct that transcend specific situations; guide selection or evaluation of behavior, people, and events; and are ordered by importance relative to other values (Schwartz, 1994). Values are likely important for developing the field of sustainable entrepreneurship. For example, the Earth Charter Initiative of the World Commission on Environment and Development lists ecological integrity, social and economic justice, community of life, and democracy and peace as central values for achieving sustainable development. What values are most influential in entrepreneurs' discovering or creating opportunities to both sustain and develop and are these the same values that inform first-person opportunity beliefs? Do values only influence the motivation to act entrepreneurially on opportunities that both sustain and develop or do values also influence the perceived feasibility of acting on such an opportunity? For example, as "what is to be developed" shifts from personal economic benefits to benefits for others or benefits to society, perhaps what was originally not perceived as feasible becomes feasible. Similarly, by shifting the focus on "what is to be developed" assessments of desirability may also change. We expect that future sustainable entrepreneurship research will build on the values literature, for example, by drawing on existing cultural value measures (e.g., Hofstede, 2001; Schwartz, 1999).

As implied above, values can lead to specific entrepreneurial actions. In this regard, perhaps the literature of pro-social behavior is useful for sustainable entrepreneurship researchers. "Pro-social behavior represents a broad category of acts that are defined by some significant segment of society and/or one's social group as generally beneficial to other people" (Penner, Fritzsche, Craiger, & Freifeld, 1995, p. 366). For example, scholars have analyzed individual factors (e.g., personality, emotionality, and childhood development, see Eisenberg, Fabes, Guthrie, & Reiser, 2000; Penner et al.) and interpersonal factors (e.g., socialization experiences, responsibility, reciprocity, and social learning, see Dovidio, 1984; Grusec, Davidov, & Lundell, 2002) that explain why people help others. Moreover, this literature has identified organizational variables such as organizational policies, practices, structures, and institutional power (Piliavin, Grube, & Callero, 2002) that motivate or de-motivate prosocial behavior of individuals. In what ways can entrepreneurial action be considered pro-social behavior and inform sustainable entrepreneurship? For example, entrepreneurial actions that provide benefits to others and/or to society could be pro-social behaviors. Perhaps the factors that encourage entrepreneurial actions that are pro-social to one segment of society differ from those that are pro-social towards the society as a whole. What are the factors that encourage entrepreneurial actions that are pro-social by preserving a culture or a community and how do they differ from those factors that explain entrepreneurial actions that are pro-social in their economic gains to others? The literature on pro-social behavior can enhance our understanding of entrepreneurial actions for different sustainability and development outcomes and therefore can help advance the field of sustainable entrepreneurship.

In sum, a psychological perspective offers a host of opportunities to study sustainable entrepreneurship at the level of the individual and analyze how individuals discover

opportunities and their motivation to exploit such opportunities. Further, it also offers opportunities for studies beyond the level of the individual, for example when exploring how individual motivation and the social environment conjointly trigger the foundation of social movements that relate to sustainable development. Researchers can significantly extend our knowledge on sustainable entrepreneurship if they exploit the richness of the psychological perspective.

## Conclusion

In this paper our purpose was to offer a greater understanding of what constitutes the academic field of sustainable entrepreneurship. We offered the following definition: Sustainable entrepreneurship *is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society*. We believe that by defining sustainable entrepreneurship, the paper provides a basis for exploring where and how future research can make a contribution to the development of the field. Indeed, our approach to defining the field of sustainable entrepreneurship is more meta-theoretic than theoretical because we propose that scholars from different theoretical perspectives can form part of this scholarly community and that such diversity is important for sustainable entrepreneurship's further development. We focused on economics, institutional theory, and psychology to illustrate some potential research questions that will advance sustainable entrepreneurship. There are many other interesting and important research questions both within these three disciplines and in other disciplines and also from different lenses such as level of analysis and/or research method. Therefore, we hope that readers find our research questions interesting but we also expect that readers, based on their different backgrounds and interests, come up with different research questions and approaches that will advance the field.

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