The Living-Dead Trap: Non-rationally Sustained Ventures as Keystone to Elucidate Entrepreneurial Decision-Making

Dr. Tomas Casas i Klett[1]
Lecturer, University of St. Gallen, Switzerland

Dr. Michael Hilb
Lecturer, University of Fribourg and University of St. Gallen, Switzerland

Introduction

> "*If at first you don't succeed, try, try, again. Then quit.*
> *No use being a damn fool about it.*"[2] W. C. Fields (1880 - 1946)

Quitting is the obvious normative action for founders of non-performing ventures. Bhidé (1999a: 71) writes "It's best to walk away" from venture that are "'unprofitable and cannot grow satisfactorily" as turnaround hopes related to radical action or an unexpected bonanza seldom materialise. Despite such advice this paper purports that in entrepreneurship 'poor or moderately performing' firms (Mason, Harrison, 1999: 6), including those projects that venture capitalists refer to as 'sideways deals' (Bagley, Dauchy, 1999a: 277), constitute not only a distinct category, they are essential to understand entrepreneurship, entrepreneurs and the nature of their decision-making. Near-success is not success - it is a trap. Theorists of old such as Knight ([1921] 2002: 366) noticed the phenomena: "Man may possibly be timid and critical on first embarking in new venture, but once committed, it seems unquestionable that the general rule is to hold on to the last ditch (…)." The paper provides a modern theoretical foundation of why in entrepreneurship entry is often easier than exit.

This paper's goal is to elucidate a specific decision-making phenomenon and at the same time contribute to a deeper understanding of entrepreneurship in general. The paper's structure is composed of four parts. It starts (I) by proposing an entrepreneur typology based on the concept of living-dead[3] founders as a discrete category in entrepreneurship. The pervasiveness of the living-dead phenomenon is then (II) inferred from a general review of failure rates and nor- or underperformance in entrepreneurship. This leads (III) the paper's main thesis where the decision to sustain a venture is often made on the basis on non-rational, non-utility maximizing behavioral criteria, which places the founder in a situation akin to a trap. This theoretical discourse is supported with hypotheses based on specific behavioral decision-making processes which bring about the living-dead trap. These hypotheses ought to facilitate the empirical verification of the entrepreneur typology, eventually linking theory to practice

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2 Bazerman, 2002: 75. Italics in original.

3 The term 'living-dead' is taken from the quote; "The great majority of start-ups fold or drag along in what one entrepreneur calls the land of the living dead." Bhidé, 1999c: 121.

with derived normative aspects. Consequently (IV) the paper aims at drawing relevant conclusions and suggests avenues for future research.

1 Entrepreneur Typology (Definitions)

Typologies of an object follow its definition. We narrow and delimit the entrepreneurship phenomena from fives directions (Casas, 2005). By doing so, we subscribe to a narrow, discriminating view of what constitutes entrepreneurship in contrast to broader all-is-entrepreneurship view. The Harvard/Babson view of entrepreneurship supplies the <u>first</u> explicit delimitation, i.e., **wealth creation** beyond "resources currently controlled" (Timmons 1990: 5 cited in Gartner, Shane, 1995: 297.) The <u>second</u> is **risk-exposure** a consequence of 'uncertainty-undertaking.' In 1755 the first theorist on the subject, Cantillon, described entrepreneurs as the self-employed who 'adjust themselves to risk' where the return is uncertain (Palich, Bagby, 1995: 426). It is the <u>third</u> characteristic, creation of a firm and its **ownership**, which exposes the founder to risk. An associate of risk-exposure is the <u>fourth</u> property we introduce: **high-growth potential**. Bygrave (1989b: 9) cites Liles (1974) calling mega-ventures 'high-potentials' and micro-ventures 'mom-and-pops. He goes on to take this fundamental position with his own taxonomy: the subjects corresponding to a narrow definition are 'macro-entrepreneurs' as their activities have greater social and economic impact than those of 'micro-entrepreneurs' (Bygrave, 1989 in Cheah, 1990: 341). The <u>fifth</u> and last element is the rather well-known **innovation** notion of Schumpeter (1934), Baumol (1993) and many others. The basic notion behind the innovation construct is that the founder introduces something unprecedented, new or seldom tried before. This bet is the source of uncertainty and has as its upside high-growth.

This narrow definition above leads to "what the entrepreneur is not." The consequence of our boundary setting is obvious from the Global Entrepreneurship Monitors (GEM) 37 country survey, where a broad definition of entrepreneurship sees a world with over 460 million practicing entrepreneurs (2002: 5). This massive number counts business founders who are well outside our narrow definition's boundaries, such as those who are (a) self-employed, (b) entrepreneurs of last resort (or necessity, such as immigrants or people with difficulties in gaining access to the job market), (c) professionals, or (d) family business owners. This paper's definition also excludes the related phenomena of (e) intrapreneurship and most (f) small businesses. Surely, many of those in these categories like the self-employed can experience ownership and degrees of risk exposure and wealth creation potential and may switch growth trajectories deciding to attempt innovation. At such an inflection point they would enter the narrow definition of entrepreneurship.

The higher the uncertainty, the innovativeness, the high-growth potential of a start-up (i.e., the narrower the form of entrepreneurship), the higher the exposure to **indeterminacy** will be. That is, the stronger the likelihood of encountering outcome-less situations where neither success (evidenced by reasonable profits, sufficient exit compensation, high sales growth) nor failure (excessive indebtedness, cash-flow issues, forced closure) have imposed their logic on the firm. When indeterminacy is a characteristic of entrepreneurial performance over a certain time period we can speak of a 'near-success curse'. When indeterminacy lasts for too long a period or yields the way to non-performance survival (i.e., returns on capital are negative or below the industry or the economy's average), entrepreneurs who decide to sustain their venture are likely to be or become prisoners of the 'living-dead trap.' Under such a circumstance founders will fail to optimize their material utility (salary, non-wage compensation) and even their psychology utility (as stress, mental health challenges, isolation, operational frustrations, tiredness, etc. overshadow the satisfaction of ownership such as being one's own boss, etc.).

Should living-dead founders be established as a discrete category of entrepreneurship, the living-dead trap might well be the most deficient (and a most prevalent) situation in entrepreneurship. A situation far more dramatic than failure itself. Accepting that surviving start-ups are owner-managed by living-dead founders, and taking the phenomena as the central unit of analysis, yields a comprehensive typology of the entrepreneurship universe (below):

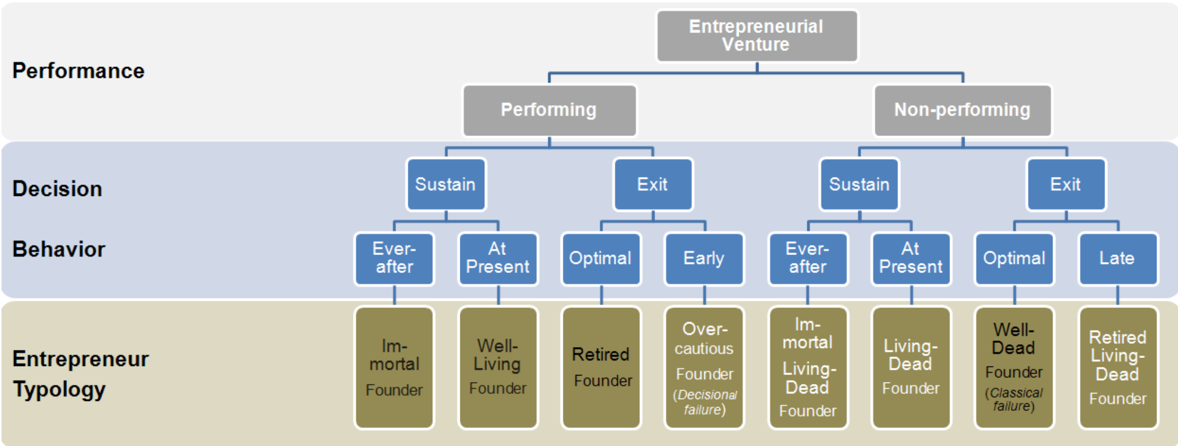

Exhibit 1: Entrepreneur typology framed by living-dead construct (performance and behavior)

Analyzing **entrepreneurship** in terms of venture outcomes (success/non success) and founder behavior (maintain/exit choices and an associated temporal dimension) brings forth a framework containing eight entrepreneur types grounded by the living-dead construct. **Living-dead founders** are entrepreneurs who sustain their venture for a *significant* period despite lack of present and future performance and value creation expectations. As a result these survivors derive lower utility (both material and psychological) from venturing than they would from alternatives (such as employment or other income generating pursuits). From a classical economics, utility maximization, rational choice theory perspective, living-dead entrepreneurs are unexplainable as they make a discrete type of non-rational decision by choosing to sustain their ventures.

The binary performance criteria of venture outcomes and founder behavior sees four founder types associated with successful venture outcomes; the **'well-living'**, the '**immortal'**, the '**overcautious**' and the **'retired founder'**. We can easily understand their particularities if we match them with their four opposite correspondent types related to non-success in the eight-fold entrepreneur typology.

The **'immortal living-dead'** are those living-dead who never quit and continue their sub-optimal entrepreneurial quest until retirement. They may have lost the train of employment or otherwise fallen too deep into the trap to get out of it. The '**retired living-dead**' are those failed entrepreneurs who escaped from the trap and quit their living-dead status. Their (ad)venture is over but while it lasted the start-up was a cause of personal economic disutility. The **'well-dead founders'** on the other hand, exist in antagonism to the living dead; also being failed entrepreneurs they nonetheless avoided falling into the trap by making a timely decision to quit. As soon as it became clear that their venture's prospects differed negatively from the initial start-up expectations to the degree that closing down was the rational course of action, they actually exited, sunk costs being sunk costs, as classical economics would have it. This optimal exit is the mainstream understanding of entrepreneurial failure. If most failed entrepreneurs belong to this category the living-dead are marginal and irrelevant.

2 Failure and Non-performance in Entrepreneurship (Phenomenological Review)

As a step prior to develop theoretical explanations for the living-dead we ought to try to establish the nature of entrepreneurship in terms of failure likelihoods and non-performance. Establishing failure likelihoods for start-ups and assessing the significance of non-performance in entrepreneurship will provide insights into the latent pervasiveness of living-dead founders and the kind of decision-making that results in this putative phenomenon. We do so through a literature review.

The literature seems to agree with the thesis that *"most firms fail"* as there "appears to be a consensus among entrepreneurship scholars and practitioners alike, even when they disagree on the actual proportions (Aldrich and Martinez 2001; Fichman and Levinthal 1991; Hannan and Freeman 1984; Low and MacMillan 1988; Stinchcombe 1965)." (Sarasvathy, 2006: 3). Empirical studies are pressed to find evidence of survival base rates greater than 50% after the first 5 years of incorporation. For instance, with remarkable consistency across the 1977 to 2001 period, the five-year survival rate for new firms was on average 48-49% (Strangler, 2009). Knaup and Piazza (2007) business longevity study sees 44% survival rates through the fourth year, and a further decrease to 31% through the seventh year. Similarly Bruno, *et al*., 1987: 51 indicate that within the first five years 54.5% of new businesses fail; by the end of the tenth year the figure was 81%. More optimistically Audretsch, *et al*., (1997) record survival rates of 69% after four years and 44% after 10 years. Moreover, survival does not indicate success as the living-dead construct purports and as Cooper, *et al*., (1994: 372) summarize: "The failure rate of new firms is high (Shapero, Giglierano, 1982) and many survivors achieve only marginal performance (Reynolds, 1987)." Depending on the pervasiveness of marginally surviving, non-performing living-dead founders, and the length of time these spend in their trap, start-up *true* success base rates could be dramatically adjusted downwards.

Another perspective on the phenomenon may come from the practice of finance, from venture capital (VC) firms who derive their right of existence from their ability to distinguishing winning from losing ventures. VC firms focus on a high-growth potential sample of entrepreneurs with perhaps one in 10,000 founders receiving VC funding (GEM, 2002: 32). Hence the VCs sample of founders is also an elite one and represents narrow entrepreneurship within the definition's boundaries.[4] Mason and Harrison (1999) while pointing out that VCs jealously guard performance data, cite Bygrave and Timmons (1992: 153) where actual average returns are in the teens, even as seasonal variance could see spikes with annual returns over 30%. Against this homogeneity of portfolio returns punctuated only by seasonality, we unsurprisingly find heterogeneity in the returns of individual firms within VC portfolios. Bhidé (1999b: 226) cites a study by Venture Economics, Inc. where 7% of start-ups result in 60% of profits, while one-third lead to losses. The often quoted (e.g., Sarasvathy, 2006) 'one in ten' survival rate benchmark provided by the National Venture Capitalists Association carries much weight. Gompers et al. (2006) find overall VC success rates for first time ventures to be 25.3%, with

[4] There is the risk of a tautological error based on the choice of the narrow entrepreneurial definition. High-growth firm-founding (like those funded by VCs) could involve significantly greater risk exposure and hence a larger prevalence of failures when compared to low-growth new firms. Such tautology falls outside the research question, as living-dead founder research concerns non-performing *surviving* entrepreneurs. Failure constitutes a forensic lead for a living-dead founder, even though not all failed ventures are anteceded by living-dead periods neither are all failed founders well-dead.

serial entrepreneurs showing above-average success rates of 36.9%. As refers to our subject, VCs may be better at preventing (or pre-empting) living-dead if they possess lesser tolerance for living-dead founders (than living-deal founders have for themselves). On such assumptions it has been hypothesized (Casas, 2005) that VCs perform a specific 'living-dead eradication' agency as part of their overall agency.

Further to the rather low probabilities of firm surviving entrepreneurship we can now examine whether survival equals success for the entrepreneur. We ought to do so by referring to studies using the salary variable and compare average incomes of entrepreneurs with the 'safer' career option: employment. As per our entrepreneur typology this comparison would be an important clue to ascertain whether active entrepreneurs are well-living or living-dead founders. Moreover, since literature on salary compensation is usually skewed towards the broad definition of entrepreneurship (including lifestyle, professional or Small and Medium Enterprise businesses), traces of living-dead in the broad definition of entrepreneurship (low-growth, low-risk exposure venturing) would be a significant indication of the pervasiveness of the living-dead trap.

Hamilton (2000: 606) finds that after a decade in business, median entrepreneurial earnings are 35% lower than predicted alternative wages. Adding nonwage compensation, such as employer-provided health insurance, makes the comparison worse for firm founders who as a group are not necessarily the less talented nor are they lower-ability workers (Hamilton, 2000: 625, 626, 627). In addition, opportunity costs exist as some authors assess the difficulty of ex-entrepreneurs to re-enter corporate life at levels equivalent to the ones their career tracks would have provided them had they not ventured (Worcester, 2001). In short, even narrow, low-growth entrepreneurship seems to be spanning living-dead founders.

The two reviewed findings of entrepreneurship (a) large failure base rates and (b) significant numbers of non-performing founders point to the existence of a living-dead class of founders who act non-rationally when they *sustain* their venture. Determining high failure base rates and non-performance in survival does not solve the 'living-dead vs. well-dead' question, but it is a keystone that allows for the construction of a behaviourist theory of the living-dead. The empirical findings might also suggest that even *starting* a venture is a non-rational decision (high failure base rates at entry) for the entrepreneur (although not for the VC who manages a diversified portfolio of entrepreneurs). Regardless, the start-up decision is distinct form the sustain decision at a venture that is non-performing as the original plans and vision can be compared with present outcomes and cash-flows. Had we discovered that entrepreneurship yields relatively low failure rates we would argue that living-dead periods of sub-optimally sustaining a new venture need not imply non-rationality since sustain decisions could be justified by future expectations informed by positive net present values associated with high success base rates. As it stands, overall large failure likelihoods make the success probability recalibration and other cognitive processes that support the decision to sustain the venture all the more suspect from a rational utility-maximization standpoint.

As a venture progresses, and in light of updated operational and financial data, entrepreneurs choose to sustain or not the venture; short of quitting they implicitly or explicitly have decided to invest further cash, sweat equity, etc. In short, unless one assumes that all failures correspond to the well-dead founder category, then *par force* some entrepreneurs sustain non-performing ventures during prolonged periods on the basis of subjective assessments divorced from success base rates for entrepreneurship, rational expectations for future venture value and income maximization.

Living-dead Trap Base Hypothesis:	Decisions to sustain non-performing ventures with expected negative present values see firm founders fall into the living-dead trap, a common entrepreneurial situation yielding measurable levels of economic disutility.

We frame the living-dead in terms of a non-rational decision to sustain a venture. Such a step would draw support from, and be a continuation of, existing streams of entrepreneurship research. For instance, of findings which do not see 'industry factors' but rather 'firm-specific characteristics' as the greatest long-run influence on firm survival likelihoods; "Heterogeneity of survival rates across firms is apparently more attributable to firm-specific characteristics than to industry-specific characteristics." (Audretsch, et al., 1997: 8). In the context of living-dead theory of entrepreneurship we would posit that survival rates are determined not by firm-specific characteristics but rather by firm-specific characteristics *resulting* from specific behavioural factors present in decision-making by entrepreneurs.

The next step is to leverage the theoretical body that assumes and purports to explain non-rational decision-making. Behavioural economics is no stranger to entrepreneurship and this body of knowledge has been applied to entrepreneurship and business studies for some time now. For instance, research shows that the bias of "overconfidence leads to excessive business entry." (Camerer, Lovallo, 2000: 415). Similar behavioural inconsistencies see only 5% of sample respondents perceiving their own success chances as poorer than those for others in the *same* business; 27% see their chances as 'exactly the same as others' while 68% assess their success odds as 'better than others' (Cooper, *et al*., 1988: 103, 104). More specifically, Palich and Bagby (1995) develop models of firm founding based on biases such as excessive optimism (of entrepreneurs) or pessimism (of non-entrepreneurs) resulting in non-optimized decision-making. Literature even includes 'entrepreneurial heuristics' (Manimala, 1992). Behaviourist and related cognitive theory, assumptions and analytical approaches are thus are a methodological choice grounded in previous entrepreneurship research which we now deploy to elucidate the living-dead trap.

3 The Living-Dead Trap of Entrepreneurship: Behavioral Hypotheses (Theory-making)

We postulate that the 'living-dead trap' (affecting presently living-dead such as the immortal living-dead as well as retired living-dead founders) can be explained by applying a combination of constructs from behavioral theory. We select key constructs related to (non-rational) decision-making, such as gamble in the domain of losses, endowment effect, non-rational escalation of commitment or outcome reinterpretation, and operationalize these as falsifiable conjectures, as living-dead hypotheses.

Sustaining Entrepreneurship as Gamble in the Domain of Losses

Fiegenbaum and Thomas (1988: 86) point to research showing that troubled companies, like troubled individuals, take greater risks in the face of tribulation. MacCrimmon and Wehrung (1988: 177) note that the willingness of managers to take risks is higher "once in a risky situation" than before entering that situation. What Krueger and Dickson (1994: 392) call 'desperate' risk seeking transcends the domain of gambling as is part of finance and strategic decisions. We posit that the desperate bet that further traps the gambler is not alien to entrepreneurship.

Kahneman and Tversky's prospect theory (1979: 287) suggests that those who have not come to terms with their losses are likely to accept gambles that would otherwise be unacceptable, building on McGlotklin (1956) who observed the tendency to bet on long shots increases in the course of the betting day. Entrepreneurs when maintaining, rather than quitting, a non-performing firm might be taking long shot gambles. Sustaining entrepreneurship could be construed as an attempt to straighten one's waning fortunes, a desperate escape forward that as such is probabilistically more often than not doomed-to-fail.

Living-dead Hypothesis 01:	Sustaining a non-performing venture is a gamble in the domain of losses.

Trapped by Endowments and the Status Quo

Anecdotal evidence from entrepreneurs asked to take regular employment points that a "mild form of hara-kiri" would be preferred to a *status quo* change (Ronstadt, 1986: 324). While a range of motivational aspects could explain such responses, we posit that the status quo bias, as described by Kahneman *et al*. (2000: 163), where individuals resist change as they perceive disadvantages to loom larger than advantages, is relevant in the firm founding context. That is akin to the endowment effect where valuation of an object is higher for subjects possessing such object (Lowenstein, 1996). Its trap-like quality results from owners being unaware of this effect (Lowenstein, *et al*., 2000: 5). In other words, the entrepreneur's subjective valuation of his firm's equity (expected future value) would be higher than that assigned by the market, the entrepreneur being unaware of his biased assessment. The ensnaring nature of the status quo bias is further noted by Loewenstein and Adler (2000: 734) as people in general are "unwittingly trapped by their choices; they make choices with an unrealistic sense of their reversibility."

Living-Dead Hypothesis 02:	The trap-like aspects of the living-dead are mediated by endowment effects and the status quo bias.

Commitment to the Venture by Non-rational Escalation

Baron (1998: 287) summarizes various factors on escalation of commitment research (e.g., Staw, Ross 1987; Bobocel, Meyer 1994): "(1) feelings of responsibility for the initial decision – once individuals make a decision, they feel responsible for it, and view reversing the decision as backing away from such responsibility; (2) the effort involved in making a decision – decisions require hard cognitive work, and most people are reluctant to begin the process all over again; (3) concerns about the loss of face and image that may result from admitting that one made a mistake; and (4) strong desires to justify one's initial choice to oneself (…)". Further to the first point, Granovetter (1985: 507) observed that small firms often persist because the dense network of social relations that overlays their business relations. Bazerman (2002: 75, 76) notes that individuals are prone to escalate commitment to the initial decision when approaching decisions serially. Baron (1998: 287) suggests that the underlying factors leading to escalation of commitment are relevant to decision-making by entrepreneurs.

Living-dead hypothesis 03:	The decision to sustain a non-performing venture by the entrepreneur is supported by a non-rational escalation of commitment mechanism that is psychologically and socially constructed.

Start-up Perseverance by Reinterpreting Outcomes

A series of studies conducted by Klaaren, Hodges and Wilson (1994) provide what may be the most direct evidence that people with positive expectations put a favorable spin on outcomes they receive, even when these outcomes might reasonably be considered disappointing (Armor, Taylor, 2002: 34). Cooper and Artz (1995: 440) showed that those entrepreneurs "who had a positive view of their initial prospects later viewed the experience of business ownership more favorably, regardless of subsequent performance." Cognitive dissonance theory, the psychological immune system and ex post rationalization of decisions describe rich process by which outcomes are reinterpreted.

Living-dead hypothesis 04:	Entrepreneurs persevere with non-performing ventures by ex post rationalization and tendencies to reinterpret actual outcomes positively.

Entrepreneurship is an ambiguous situation where reinterpretation of outcomes as well as other behavioral phenomena we have linked to the decision to sustain ventures, could occur as a matter of course. What we call the "entrepreneurial trap" may thus be as predictable as it is widespread. This section has hypothesized a series of hypothetical causes for the putative living-dead phenomenon based on various constructs within a specific and coherent theoretical framework. Consistent with multivariable explanations of human behavior the four causal hypotheses are by no means exhaustive; other behavioral factors of non-rational decision making would be expected to also play roles in leading entrepreneurs to sustain their ventures in the face of non-performance and low likelihoods of meeting original performance objectives.

These four hypothesis either jointly, as a combination, or as a combination with new living-dead trap hypotheses (principally based on constructs from behavioral theory), attempt to explain the living-dead trap by referencing the entrepreneur's behavioral (non-rational) decision-making process. Through an understanding the living-dead trap phenomenon we not only recognize and explore a category of entrepreneurs; we also develop a keystone to elucidate the broader entrepreneurship subject and its associated decision-making mechanisms.

4 Implications and Avenues for Further Research (Conclusions)

This paper concludes with practical implications and suggests questions for further research. Implications will include the development of normative insights to assist in the reduction of the specific living-dead decisional error which the authors of this paper view as one of the gravest and most taxing in entrepreneurship.

Theoretical implications

The following research avenues will help falsify, reformulate or refine the living-dead trap and the living-dead hypotheses of entrepreneurship. Beyond the sparse set of existing empirical research in the topic, there is room for further studies.

Research avenue 01: Further empirical identification of the success, survival and failure base rates for entrepreneurship. That is, for both the narrow and broad definitions, across industries, geographical settings etc in which success, survival and failure are defined both by objective monetary and by subjective psychological utility standards by means of direct surveys and meta-studies.

Research avenue 02: Design of "*living-dead performance indicators*" (LDPI). That is descriptive and measurable benchmarks of entrepreneurial non-performance. These indicators would constitute decision-criteria for empirically resolving the living-dead vs. well-dead question, and would enable the description of living-dead founders in measurable terms. Prior to hypothesising their relevance, these indicators would need to be theoretically constructed. For instance, a living-dead founder would be qualified by the number of months and the earnings differential size of founder income relative to wages related to relevant available labour market career choices. Another LDPI would suggest certain levels of returns on investment over certain periods of time to constitute entrepreneurial non-performance. Statistically relevant accounting losses and debt levels (both hidden and explicit) would be established to support the normative decision to terminate the venture. Once established, these performance metrics would provide an empirically grounded description allowing an indexed description and measurement of the living-dead trap and its multiple facets.

Research avenue 03: Analysis of qualitative and quantitative "*VC start-up termination indicators*" employed by different VCs. The idea is to identify specific performance indicators VCs employ to close down or refrain from further supporting investee companies (i.e., cash levels, sales growth percentages, deviation deltas from original goals, milestone types missed, etc). Such indicators would be contrasted with and inform LDPIs.

Research avenue 04: Theoretical and empirical grounding of the skill vs. randomness discussion of success in entrepreneurship. Schumpeter (1944) or Gompers et al. (2006) emphasize skill as the best explanation for success and failure in new ventures, whereas Kihlstrom and Laffont (1979) or Casas (2005) see luck (i.e., the normal distribution). The larger the extent of the randomness explanation the more likely that behavioral non-rational decision-making can be associated with firm founding and maintenance and hence the higher the prevalence and significance of the living-dead.

Research avenue 05: Survey of founders to track performance over time as associated with the present rationale employed to sustain (or to discontinue) the venture. Part of the regularly administered questionnaire would assess the evolution over time of subjective success probabilities as well as other expectations about the venture. The 'length of time' living-dead founders actually spend in their trap would be a critical side-question. Moreover, the questions would aim at identifying behavioural decision-making criteria (including non-rational criteria such as biases or heuristics). Such a survey could test the four hypotheses of this paper as well as any other behavioural phenomena which the authors would wish to add as potentially relevant choices related to the living-dead trap.

Research avenue 06: Verification of the living-dead centred entrepreneurial typology based on performance and behaviour criteria (Exhibit 1). The existence of each of the eight founder types is to be empirically confirmed after each has been theoretically grounded. Mutual exclusiveness and overlapping between the eight types is to be assessed. Lastly, metaphors would be develop to link this typology to practice (i.e., *Gallipoli entrepreneurs* being those overcautious founders who quit too early unknowing that victory is but a few bullets away).

Research avenue 07: Case studies of active entrepreneurs to achieve thick descriptions of living-dead and their decision-making processes. Basic survey questions would focus on achievement/non-achievement of original start-up objectives (timely/un-timely fashion). The founder's initial objectives would be as identified with as much specificity as possible (ideally with LDPIs, or in the absence of these with financial indicators such as profits, payback time, IRRs). Other relevant objective performance indicators could include (the more sensitive) income brackets (comparing the case study subject levels with levels at a comparative sample of individuals pursuing regular careers). Such designs would ascertain the number of 'well living' in the sample. For those founders having not yet achieved 'success', further questions on expectations and specific goals would be made to examine the nature and 'depth' of the living-dead trap. Related and more directly to the decision to sustain a venture hypothetical questions would inquire on what circumstances would force founders to exit the 'investment mode' or, rather, the '*prolonged* investment mode' (that is, a metaphor on unrecoverable opportunity costs and non-utility maximization situations - metaphors to achieve respondents' bias reduction ought be part of such studies). Ideally such case studies would be longitudinal, following a sample of entrepreneurs over time.

Practical Implications: Normative aspects of the living-dead trap

Falling into the living-dead trap can be a personal tragedy as well as a significant macro-economic inefficiency resulting in a tremendous misallocation of resources, i.e. human and financial capital. On the other hand, the differentiation between a situation where an entrepreneur is in the living-dead trap or where he or she is just in a situation where he or she is temporary non-performing due to the uncertain nature of any new business in the start-up phase is blurred at best.

Nevertheless, there is empirical evidence and theoretical reasons to suspect that entrepreneurship turns into a deadly trap when founders are faced with indeterminacy or actual non-performance. To avoid falling, or at the least sinking deeper into this trap, preventive methods ought to be theoretically developed and verified by practice. That is all the more true since any attempt to close non-performing ventures invariably generates certain Type II errors where firms that would succeed (if not denied the extra million needed) are terminated.

Methodologies to detect, avoid and defuse the living-dead trap are the obvious practical consequences of a 'living-dead theory of entrepreneurship.' Past suggestions in this regard include the 'bounded luck' agency (Casas, 2005) where behaviourist competence is pursued to leverage emotions and non-rational decision-making tendencies for purposes of utility maximization, legal control and action advisory packages (not unlike those implemented by VCs as part of their mandates). More sophisticated and grounded living-dead trap eradication include, for instance, moving the founder away from personal initial commitment and reducing the perceived value of his endowment. Applying Bazerman's suggestion (2002: 76, 77) entrepreneurs would be made cognizant that time and expenses already invested are but 'sunk costs.' Such living-dead ad hoc bias reduction actions would aim at forcing entrepreneurs to make a second decision (Ibid: 83). That is, venture maintenance decisions premised as new problems which have to be examined objectively.

A second important practical implication is that awareness for the issue needs to be increased in order to make entrepreneurs, investors (such as VCs, business angles, family and friends or banks) as well as society in general (governments, unions, education establishments) sensitive to the implications of the living-dead trap. The more entrepreneurship is recognized as creating wealth for society as a whole, the more pressing it becomes on financial and ethical grounds to deal with the living-dead trap. The research agenda outlined above may play a part in achieving awareness.

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