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## Intrapreneurship

Conceptualizing entrepreneurial employee  
behaviour

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# **Intrapreneurship**

Conceptualizing entrepreneurial  
employee behaviour

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## **Abstract**

Intrapreneurship refers to employee initiatives in organizations to undertake something new, without being asked to do so. As the detailed behavioural content of intrapreneurship is still uncharted, this paper surveys three relevant strands of literature. These are early-stage entrepreneurial activity (business founding) and two literatures on employee behaviour inside existing organizations, i.e. proactiveness and innovative work behaviour. By combining insights from these domains with those from the emerging intrapreneurship literature, we derive a detailed list of relevant activities and behavioural aspects of intrapreneurship.

Major activities related to intrapreneurship include opportunity perception, idea generation, designing a new product or another recombination of resources, internal coalition building, persuading the management, resource acquisition, planning and organizing. Key behavioural aspects of intrapreneurship are personal initiative, active information search, out of the box thinking, voicing, championing, taking charge, finding a way, and some degree of risk taking.

The paper next discusses the similarities and differences between intrapreneurship and independent entrepreneurship. Most but not all of the activities and behavioural aspects of the latter are also typical of the former phenomenon. Key differential elements of independent entrepreneurship are the investment of personal financial means and the related financial risk taking, a higher degree of autonomy, and legal and fiscal aspects of establishing a new independent business. Based on this discussion an integral conceptual model of intrapreneurial behaviour is presented. The paper closes with conclusions.

The appendix of the paper discusses measurement issues, and provides an initial nomological net for validation purposes. We first present how previous work has measured behavioural aspects of intrapreneurship. Next, a nomological net is presented that discusses various individual and firm level antecedents, as well as the consequences of intrapreneurial behaviour. The annex is meant as a prelude on future empirical work to develop and validate a multidimensional intrapreneurship scale.

**Keywords:** intrapreneurship, early-stage entrepreneurial activity, entrepreneurial behaviour, proactiveness, innovative work behaviour.

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## 1. Introduction

In the past decades both the entrepreneurship and the management literature have shown increasing attention for entrepreneurship within existing organizations. This phenomenon is usually called ‘corporate entrepreneurship’ or ‘intrapreneurship’. In a recent overview, Antoncic and Hisrich (2003) conclude that entrepreneurship in existing organizations can be studied at various levels of inquiry, the most important distinction being the organizational and the individual level. At the level of organizations, research has been done on the formation of new corporate ventures (emphasizing the differentiation of types of new ventures and their fit with the corporation) and on the entrepreneurial organization (mainly emphasizing characteristics of such organizations). At the level of individuals, the focus is on the individual characteristics of the entrepreneurial employee or intrapreneur (cf. Pinchot, 1985).

So far most attempts to study entrepreneurial efforts within organizations have focused on the organizational level. In order to define corporate entrepreneurship, Sharma and Chrisman (1999) made an inventory of definitions of entrepreneurship in existing organizations. Only two out of 27 definitions were formulated at the level of individuals (p. 14-15). In this respect Zahra, Jennings and Kuratko (1999) state that ‘the literature would benefit from revisiting the various units of analysis used in research into firm-level entrepreneurship. To date, and perhaps predictably, the literature focuses on overall firm-level activities’ (p. 55). The role of individuals’ entrepreneurial behaviour within organizations has hardly been studied (Zahra et al., 1999: p. 52). Thus, the literature is biased towards the organizational level while individuals are somewhat overlooked. According to Hammann (2006) all investigations of entrepreneurship in existing organizations leave the following questions unanswered: who are the individuals behind the intrapreneurial process, what is their role, and how can their behaviour be effectively managed?

With the present paper we start with exploring these intriguing questions. The focus is on intrapreneurial behaviour, i.e. on what entrepreneurial employees in existing organizations do. Our main objectives are to take stock of the most characteristic elements of intrapreneurial behaviour. This overview is a prelude to the measurement of intrapreneurial behaviour, a subject that will be covered in our future research. Apart from the emerging individual-level intrapreneurship literature, three other streams of literature are studied. We surveyed insights from studies into independent entrepreneurship (and particularly business founding). This well-developed research field has created many insights that relate to individuals’ intrapreneurial behaviours. We also surveyed two related subjects from organizational employee behaviour research, i.e. proactiveness and innovative work behaviour.

The paper first defines and briefly discusses intrapreneurship at the individual level (section 2). Next, various aspects of intrapreneurial behaviour are identified from the three above-mentioned literatures (section 3). Subsequently, we compare the findings of these three literatures, derive relevant conceptual elements of intrapreneurship, and synthesize these into a conceptual model (section 4). The paper ends with our conclusions on the relevant aspects and dimensions of employees’ intrapreneurial behaviour (section 5). The appendix elaborates on measurement issues and gives a brief preliminary

inventory of antecedents and consequences of intrapreneurship. These materials will be further applied in our future work to develop an intrapreneurial behaviour measure.

## 2. Intrapreneurship: entrepreneurial employee behaviour

As indicated in the previous section, intrapreneurship is not the only label for entrepreneurship within the boundaries of organizations. A frequently used alternative term is corporate entrepreneurship (CE). How CE differs from intrapreneurship is truly a matter of definition; researchers have proposed and adopted a plethora of definitions in which both terms were used to define entrepreneurial activities at the level of either organizations or individuals. While the distinction between intrapreneurship and CE thus is equivocal, the above-mentioned overview of Sharma and Chrisman (1999) indicates that CE is usually defined at the level of organizations while intrapreneurship relates to the individual level (also see Pinchot, 1985; 1987). In this respect Amo (2006) proposes that corporate entrepreneurship is a top-down process, i.e. a strategy that management can utilize to foster more initiatives and/or improvement efforts from their workforce and organization. In contrast, intrapreneurship is bottom-up, related to proactive initiatives of individual employees to improve work procedures or products and/or to explore and exploit business opportunities.

The notion of intrapreneurship is clearly derived from the concept of independent entrepreneurship. Although definitions of entrepreneurship abound (see Wennekers and Thurik, 1999, for an overview), the following description delineates the hard core of the (independent) entrepreneurship concept rather accurately: ‘the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence’ (Hisrich & Peters, 2002: p. 10). This definition of entrepreneurship also seems more or less applicable to the concept of intrapreneurship, while taking account of the fact that intrapreneurs act within organizational boundaries and thus are less autonomous than independent entrepreneurs, reap fewer financial benefits of their entrepreneurial engagement and take fewer personal risks. The organizational context thus implies restrictions but also provides a considerable amount of security as the intrapreneur is not liable with his/her private means in case of failure.

### *Defining intrapreneurship*

Previous work has proposed various definitions of intrapreneurship. These definitions share a number of features. First, intrapreneurs are proactive individuals with a strong desire for action. They are ‘self-starters’ who do not have to be asked to take an initiative. In fact, they usually do not even ask for permission, and may ignore disapproval and other negative reactions from their environment about their ideas. Second, their proactive behaviour is focussed on the pursuit of an opportunity without regard to the resources they currently control<sup>1</sup>. Somehow intrapreneurs always seem to find a way. And third, intrapreneurs often pursue something that in some sense is ‘new’ or ‘innovative’, i.e. intrapreneurial behaviours and actions deviate from the status quo. In table 1 we give an overview of previously formulated definitions.

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<sup>1</sup> See Stevenson and Jarillo (1990: 23).



table 1. Definitions of intrapreneurship

Vesper (1984: 295, in: Sharma & Chrisman, 1999)	Intrapreneurship is “employee initiative from below in the organization to undertake something new; an innovation which is created by subordinates without being asked, expected, or perhaps even given permission by higher management to do so”.
Pinchot (1985, p. ix, in: Sharma & Chrisman, 1999)	“Intrapreneurs are ... ‘dreamers who do’; those who take hands-on responsibility for creating innovation of any kind within an organization; they may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality”.
Stevenson and Jarillo (1990: 23)*	Intrapreneurship refers to “a process by which individuals ... inside organizations pursue opportunities independent of the resources they currently control”.
Antoncic and Hisrich (2003: 20)	Intrapreneurship refers to “emergent behavioural intentions and behaviours that are related to departures from the customary ways of doing business in existing organizations”.

\* Stevenson and Jarillo define the general underlying concept of entrepreneurship, from which definition we have here cited the part referring to intrapreneurship.

Beyond definitions, the detailed behavioural content of intrapreneurship is still pretty much uncharted. However, research at the organizational level confirms the characteristic dimensions of intrapreneurial behaviour as indicated in the above definitions while adding some more detail. In the literature on firm-level entrepreneurship, an influential classification is based on Miller’s (1983) categorization of corporate entrepreneurship. Covin and Slevin (1986, 1991) have expanded on this concept and retained three characteristics of organizational level entrepreneurship: proactiveness, innovativeness and risk taking. These dimensions are often supposed to consistute a higher-level construct called entrepreneurial orientation<sup>2</sup>. Similar dimensions are maintained in more recent classifications of organizational level entrepreneurship, e.g. Antoncic and Hisrich (2001) conclude that previous views of firm-level intrapreneurship can be classified into four dimensions: new business venturing, innovativeness, self-renewal and proactiveness. Knight (1997) also favors a multidimensional concept but on the basis of empirical findings, he proposes to reduce Covin and Slevin’s (1986, 1991) categorization to two dimensions: innovativeness and proactiveness.

In all, previous definitions and perspectives consistently mention opportunity pursuit, resource acquisition, risk taking, proactiveness and innovativeness as key elements of entrepreneurial behaviour in existing organizations. There is a literature on each of these phenomena. The literature on early-stage entrepreneurial activity by new business founders has opportunity pursuit as a main focus and also pays ample attention to resource acquisition and risk taking. However, while conceptually quite relevant in many respects, this domain is exclusively focussed on individuals pursuing an opportunity outside existing organizations. As a consequence, specific contextual elements having to do with one’s position as an employee inside an existing business are missing. These elements may be added by organizational behaviour studies that focus on employee behaviour inside existing organisations, and are known as respectively proactive behaviour and innovative work behaviour. In the next section we will discuss these three literatures with an eye on identifying relevant aspects for conceptualising and measuring intrapreneurial behaviour.

<sup>2</sup> In a well-known model by Lumpkin and Dess (1996) the entrepreneurial orientation construct additionally includes autonomy and competitive aggressiveness.

### 3. Three relevant literatures

Drawing on the entrepreneurship and organizational behaviour literatures we will now present an inventory of behaviours that working individuals exhibit when they act in an entrepreneurial manner. First, the aforementioned literature on early-stage entrepreneurial activity studies new business founders. Their relevant activities and behaviours are discussed in section 3.1. Next, the organizational behaviour literature concerns employees and managers working for an enterprise or corporation. Here, relevant intrapreneurial behaviours are proactiveness (section 3.2) and innovative work behaviour (section 3.3).

#### 3.1 Early-stage entrepreneurial activity

Sternberg and Wennekers (2005) make a distinction between an occupational and a behavioural notion of entrepreneurship. The former refers to individuals owning and managing a business for their own account and risk ('self-employment'), while the latter focuses on entrepreneurial behaviour in the sense of pursuing an economic opportunity ('entrepreneurship'). Obviously, these two notions overlap as is shown in the upper left hand cell of figure 1, where on the horizontal axis we present two occupational alternatives and on the vertical axis two behavioural categories.

figure 1. Double dichotomy

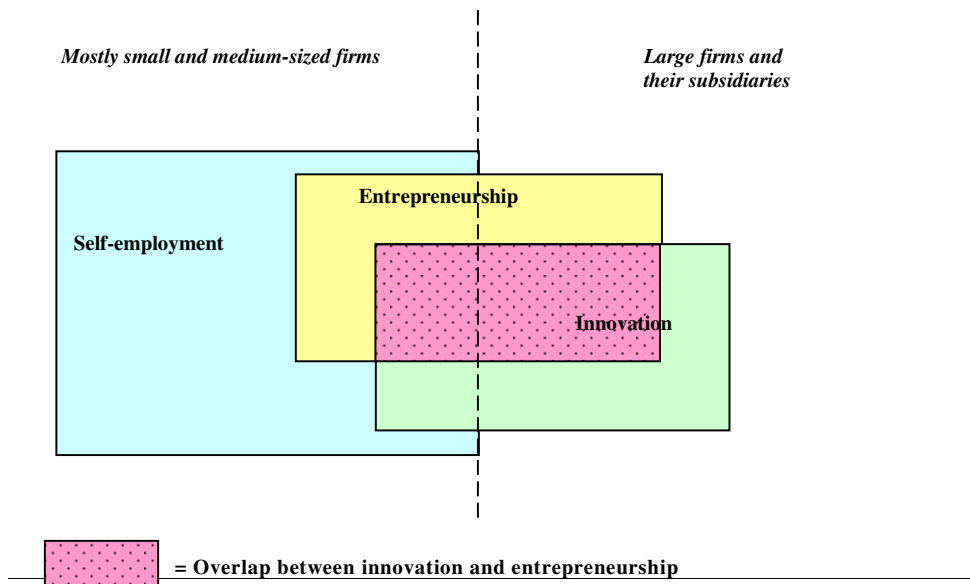
	<i>Self-employed</i>	<i>Employee</i>
<i>Entrepreneurial</i>	independent entrepreneurs	intrapreneurs (or corporate entrepreneurs)
<i>Managerial</i>	(managerial) business owners	executive managers

Source: Wennekers (2006).

For our discussion of intrapreneurship in the next section it is also useful to determine how self-employment and entrepreneurship relate to innovation, which we broadly define as the creation and implementation of useful ideas for new products, services, production methods and management practices. Figure 2 illustrates how both entrepreneurship and innovation partly belong to the world of self-employment, but also take place within large corporations and their subsidiaries. Additionally, entrepreneurship and innovation partly overlap, but also partly exclude each other. Imitative (non-innovative) acts such as opening another outlet in a sofar unexploited neighbourhood can be very entrepreneurial (here we differ from Stam (2008), who views entrepreneurship as fully belonging to the domain of innovation). Vice versa, many innovations such as the implementation of

improvements in internal workprocesses or the introduction of marginal changes in products do in our view not belong to the realm of entrepreneurial behaviour.

Figure 1 Self-employment, entrepreneurship and innovation



Source: adapted from Stam (2008)

Within the wide-ranging domain of entrepreneurship studies, there is a large and growing literature on new enterprise formation – also known as early-stage entrepreneurial activity<sup>3</sup> - taking the opportunity pursuit perspective (for example Shane, 2003; Bygrave & Zacharakis, 2008). As we propose that this perspective can also be applied to entrepreneurial employees (upper right hand cell of figure 1), we will now inventarize this literature and will see how it may help to classify what intrapreneurial behavior entails.

In Shane's theory of entrepreneurship (2003), the 'individual-opportunity nexus' is the cornerstone of analysis. While opportunities may be conceived to exist objectively in reality, they can only be detected by individuals. In addition, entrepreneurship in the sense of the pursuit of these opportunities also requires individuals to act, i.e. to take various initiatives with respect to resource acquisition and the organization of new ventures (Stevenson & Jarillo, 1990: 23). In fact, to pursue entrepreneurial opportunities individuals need to conduct a range of practical activities in the business domain, and each of these activities requires specific types of behaviour. To start up a new business, individuals need to develop a product, service model or prototype, raise funds and organize operations to exploit the opportunity (see Reynolds, 2007). Relevant behaviours include taking initiative, surmounting obstacles and getting the job done (Pinchot, 1987).

<sup>3</sup> In addition, entrepreneurial activity of growth-oriented and/or innovative owner-managers of incumbent businesses receives some, be it scant, attention in the small business literature. There does not seem to exist a general literature on entrepreneurial activity encompassing both business founders and established entrepreneurs.

The linguistic history of the word entrepreneur strongly supports the axiom that entrepreneurship is primarily behaviour-oriented. The underlying medieval French words 'entreprendre' and 'emprendre' refer to respectively 'doing something' or 'getting things done' and to 'commencing, taking initiative' (Wennekers, 2006).

The investigation of early-stage entrepreneurship presented hereafter is based on a small number of authoritative studies in the field<sup>4</sup>. In these studies, entrepreneurship is primarily couched in terms of practical 'firm organizing activities', such as market exploration, product development and resource acquisition<sup>5</sup>. In addition behavioural aspects of these activities will be discussed. These are the types of entrepreneurial behaviour which get more focal attention in other sources such as Schumpeter (1934), Pinchot (1987) and Cromie (2000). Based upon the entrepreneurship literature, we distinguish between five major activities making up the concept of 'early-stage entrepreneurial activity', and five behavioural aspects that play a varying role in these activities. These activities and behavioural aspects are summarized in table 2.

table 2. Early-stage entrepreneurship: activities and behavioural aspects

<i>Activities</i>	<i>Behavioural aspects</i>
A1. Opportunity perception	B1. Creativity
A2. Designing the new product or concept	B2. Taking initiative
A3. Exploring the market	B3. Overcoming obstacles
A4. Resource acquisition	B4. Getting the job done
A5. Organizing the new business	B5. Bearing uncertainty and risk

Linking activities to behavioural aspects is fruitful from both a theoretical and a measurement point of view. By themselves behaviours like initiative and creativity are not domain specific and might as well concern the active promotion through the firm's personnel council of a more offensive RSI-policy or the organisation of an excursion trip or festive event for all employees. The combination with the activities in column one of the table clearly focusses the behavioural aspects in column two on the pursuit of entrepreneurial opportunities.

#### *Ad A1. Opportunity perception<sup>6</sup>*

The concept of entrepreneurial opportunity is not defined in an unambiguous manner. Its aspects and dimensions are subject to debate in several scientific disciplines. A recent special issue of Small Business Economics discusses to what extent an opportunity is a subjective or an objective construct, and also distinguishes entrepreneurial opportunities from opportunities in general (McMullen et al., 2007).

<sup>4</sup> Most notably Gartner and Carter (2003); Shane (2003); Reynolds (2007); Bygrave and Zacharakis (2008). Bird (1989) summarizes various listings of relevant 'entrepreneurial activities' in the earlier literature.

<sup>5</sup> In the early-stage entrepreneurship literature, firm organizing activities are the cornerstone of the analysis. More so, for Gartner and Carter (2003: 195-199) these activities are the operationalization of entrepreneurial behaviour.

<sup>6</sup> Related terms are opportunity recognition, discovery and identification. Underlying (preceding) activities are often indicated as opportunity exploration. A somewhat different approach is suggested by the term opportunity creation. A more general term encompassing many related activities is the pursuit of opportunity.

Here, loosely following Shane (2003: p. 18), we define an entrepreneurial opportunity as any possibility for a recombination of resources that an individual expects to be profitable. This recombination may imply a new product or service, a new geographical market or a new production process. We also follow Shane's proposition that entrepreneurial opportunities are firmly founded in reality, and not randomly distributed, but rather they vary in frequency and value across industries. Kirznerian opportunities reflect disequilibria (i.e. shortages and/or surpluses) due to imperfections in the economic system. Examples are the establishment of an internet café, a telecom shop or a restaurant in a street where there was no such business before. Schumpeterian opportunities reflect 'new information' originating from technological changes, regulatory changes or socio-demographic changes. Schumpeterian opportunities are often radically innovative.

According to Sarasvathy et al. (2003) opportunities can be either recognized, discovered or created. Recognition relates to opportunities like exploiting an existing market, competing for a share of a market or responding to an increase in demand. Discovery implies that there is a latent market, for instance related to deregulation, or because only demand exists (such as a new consumer preference or a needed cure for a disease) or only supply (such as a product or commercial formula from abroad). Creation means that there is no obvious supply and demand yet, such as for applications of new radical technologies or for a new recreational concept. For reasons of simplicity we here subsume all three forms as 'opportunity perception'.

The perception of opportunities is more valuable if it is not shared by (many) others. Thus nascent entrepreneurs and intrapreneurs 'must either possess different information than others or interpret the same information differently' (Shane, 2003: p. 41). This emphasizes the importance of social capital and of active search for information.

As we have seen, opportunities have both an objective component (in reality) and a creative one<sup>7</sup>. Nascent entrepreneurs have to assess and interpret the information available to them, and to create a new possible 'means-end framework' based on this information (Shane, 2003: p. 42). This is a creative process (Gaglio and Katz, 2001). In other domains this is also called idea generation (see section 3.3).

Shane (2003) sees two mechanisms that are necessary to discover opportunities. The first mechanism is access to information. There are several access routes, including knowledge corridors (information one has automatic access to through one's occupation), search (entrepreneurs sometimes deliberately look for specific information) and social ties (this is implicit search; networking with external contacts in the end always provides useful new information, even when one has no idea what one is looking for).

Access to information is however not enough to discover opportunities and turn them into 'new combinations'. One has to make creative use of the information. This requires cognitive abilities to understand causal links and to see patterns in information, as well as an inclination to perceive opportunities where others see risks (see Gaglio and Katz, 2001, and Shane, 2003: p. 52-59). So the second mechanism is based on the use of cognitive abilities, including alertness (the ability to derive new combinations from

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<sup>7</sup> While entrepreneurs are usually not the inventors of the underlying technology, they are the ones who perceive the new possibilities for (re)combinations of resources (Ministerie van Economische Zaken, 2001). This is a creative process.

changes in the outside world), creativity (the ability to think out of the box) and prior knowledge (this helps to see the impact of new information more quickly. Successful new entrepreneurs often start up in sector where they have worked as employees first).

*Ad A2. Designing the new product or concept*

Most new enterprises are based on the production of a new good or a service, on a new concept for producing or distributing an established product, or on a new product-market combination. For these new initiatives, product or concept development often includes a phase of designing and testing a prototype. This may be combined with market research (see below) to take advantage of the feedback from potential customers. Sometimes a new product or concept does not meet the demands of the anticipated customers, but may serve other, unexpected markets (Pinchot, 1987). New products often entail the use of information and communication technology. New services and distribution concepts are increasingly web-based. This trend is particularly prominent in business services and in retailing, but to some extent also applies to personal services and to the hospitality sector.

*Ad A3. Exploring the market*

A vital question in early-stage entrepreneurship is to ask ‘who are my customers?’. This is of course strongly dependent on the nature of the good(s) and/or service(s) the new enterprise wants to sell. Is it primarily business to business or business to consumers? A first challenge for the budding entrepreneur is to identify his/her ‘primary target audience’ (Bygrave & Zacharakis, 2008). These are the potential customers that are most likely to buy at a profitable margin and frequency. Exploring the market includes an investigation of the needs and other key characteristics of this primary target group. The findings in this phase not only help the entrepreneur to design a marketing strategy, but also give useful inputs for the previous and overlapping phase of product development. Sometimes lower order target groups, who are expected to buy smaller quantities or to buy at a lower frequency, will also be profiled and investigated.

Other relevant questions in this stage have to do with the structure of the market. Are there few, large potential customers or many small ones? Can the new enterprise reach out the small customers directly, or is distribution only possible through wholesalers or retailers? Can the customers be reached through internet? And what does the supply side of the market look like? Are there competitors who are selling a similar product, or a different product that may be competing with one's own product? Finally, the role and the market power of one's suppliers may be an important consideration.

*Ad A4. Acquisition of financial resources*

Following Stevenson and Jarillo (1990), we view entrepreneurship as the pursuit of opportunities without regard to the resources one currently controls. Consequently, the acquisition and/or mobilization of resources, be it few or many, is often one of the most crucial activities in new enterprise creation. Obviously the acquisition and recombination of resources must be financed. Self-financing is the most common and the main source, but sometimes a new enterprise also needs capital from external sources. For various forms and various sources of finance for new business ventures see chapter 8 by Shane (2003) and chapter 10 by Bygrave and Zacharakis (2008).

#### *Ad A5. Organizing the new enterprise*

Organizing is a central activity in new business formation. Gartner and Carter (2003) subsume all nascent entrepreneurship under the overall heading of an 'organizing process'. Here, we mean organizing in a more limited sense of making the practical preparations and arrangements for launching an operational new venture. This also involves 'creating routines and structures that will be used to recombine resources into the product or service sold to customers' (Shane, 2003). Although organizing a new business inevitably implies a great deal of improvisation, it also includes a varying amount of planning. Organizing a new venture is inherently uncertain, but planning may reduce the degree of uncertainty and may hence provide a more factual basis for decision making. Planning also provides discussion points with potential cofounders, employees, suppliers, customers, investors and advisers. Essentially, planning is a process and thus entails much more than writing a business plan. Planning may include carrying out customer and/or competitor analysis as well as elaborating plans for marketing and operations.

Finally, a crucial element in organizing a new business is creating a founding team. Apart from very small solo enterprises, new business founding is usually a 'team sport' (Bygrave and Zacharakis, 2008: 222). Thus deciding who should be on the team is a critical task facing every lead entrepreneur. The founding team may include cofounders who make key contributions and will be co-owners of the new business. It usually also includes employee startup team members, who receive a salary and may be entitled to share options in the new business. Additionally, 'virtual' external team members may include outside investors, legal advisors, accountants and other relevant experts.

In addition to the attention for concrete activities in the empirical literature on emerging enterprises, other sources discuss various behavioural aspects of entrepreneurship. These will be discussed below.

#### *Ad B1. Creativity*

One of the first scholarly publications on entrepreneurial behaviour is Schumpeter (1934), who regards entrepreneurs as creators of 'new combinations'. A role for creativity in entrepreneurial activity has since been corroborated by several psychological studies of entrepreneurship. Cromie (2000), in his survey article on entrepreneurial attributes, concludes that according to the literature entrepreneurs have more creativity than others. They tend to think in non-conventional ways and to challenge existing assumptions. Some authors consider innovation (i.e. adoption and/or application) rather than invention as the heart of entrepreneurship (Drucker, 1985, as cited by Cromie, 2000). Pinchot (1987) emphasizes how entrepreneurs are constantly juggling potential implementation plans in their imagination, and so do most of their creative work in lost moments. Additionally, and confirming the applied character of entrepreneurial creativity, it has been hypothesized that entrepreneurs have a talent for identifying the profit potential in ideas and events (Gaglio and Katz, 2001).

#### *Ad B2. Taking initiative*

Linguistically, as discussed before, the noun entrepreneurship originates in two medieval French words ('entreprendre' and the older 'emprendre') for taking initiative. Likewise,

the major contemporary Dutch dictionary<sup>8</sup> shows that the verb 'ondernemen' (to undertake) means 'to take upon oneself' and 'to commence to do'. According to the same dictionary an 'ondernemer' (entrepreneur) is someone who takes a venture or difficult task upon him or herself. Additionally, in a random sample of 462 Dutch adults aged between 18 and 65 years, initiative was among the five (out of eighteen) attributes that were self-reported most frequently as characteristic of individual enterprising behaviour (Van Gelderen, 2000). Taking initiative is clearly a hallmark of entrepreneurship.

#### *Ad B3. Overcoming obstacles*

Nascent entrepreneurs have to believe very strongly in their idea (Ministerie van Economische Zaken, 2001: p. 56-67) in order to find the energy and courage to overcome the many obstacles on the road to success, and to convince potential customers and potential financiers of their idea. Potential obstacles are many and include scepticism, technical and logistic problems, resistance by competitors and legal barriers. Pinchot (1987), who describes intrapreneurs as 'dreamers who do', considers problem solving as one of their key characteristics. Quite contrary to promoters who fully focus on selling their idea and tend to ignore the barriers along the way to implementation, real entrepreneurs (including intrapreneurs) constantly explore all kinds of possible problems in their imagination and consider alternative ways to overcome these barriers.

#### *Ad B4. Getting the job done*

Schumpeter (1934), as paraphrased by Swedberg (2000) was one of the first to note 'will to succeed' and 'satisfaction of getting things done' as key motivations of entrepreneurs. However, success is never guaranteed in entrepreneurship, and a substantial percentage of nascent entrepreneurs never get their new business up and running (Gelderen et al., 2005; Reynolds, 2007)<sup>9</sup>. So while 'getting the job done' is a key purpose of early-stage entrepreneurs, and perseverance is one of their key characteristics (Ministerie van Economische Zaken, 2001: 39-44), actual success is not an indispensable element of entrepreneurship.

#### *Ad B5. Bearing uncertainty and risk*

Although entrepreneurs generally prefer moderate rather than high risks (Cromie, 2000: p. 19), business founding obviously entails uncertainty and risk<sup>10</sup>. In fact, since Cantillon (1734), who defined the entrepreneur as a person who bears the risk of profit or loss, risk taking has been viewed as a fundamental element of entrepreneurship (Antoncic & Hisrich, 2003). According to Knight (1921; as cited by Van Praag, 1999), the entrepreneur's main function is bearing the real uncertainty by making judgmental decisions in the face of incalculable and uninsurable business hazards. Cromie (2000) states that entrepreneurs frequently have to take decisions with incomplete information, and thus must have considerable tolerance for ambiguity. There is ample empirical evidence that entrepreneurs have a more positive risk attitude than other groups (Van Praag, 1996; Cromie, 2000). The role of uncertainty and risk in entrepreneurship is also

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<sup>8</sup> Van Dale Groot Woordenboek der Nederlandse taal, 1999.

<sup>9</sup> While there are serious methodological caveats, the order of magnitude of the failure rate seems to be around 50%. However, there is substantial divergence across countries due to national idiosyncrasies.

<sup>10</sup> For the relationship between uncertainty and risk, see Wennekers et al. (2007).



reflected in popular opinion. In the sample of 462 Dutch adults, cited above, risk/uncertainty was the most frequently mentioned characteristic of enterprising behaviour (Van Gelderen, 2000).

At the individual level risk taking can refer to the quick pursuit of opportunities, fast commitment of resources and bold actions (Antoncic & Hisrich, 2003). Mintzberg (1973) views risk taking as an element of his entrepreneurial mode, where entrepreneurial strategy-making is characterised by dramatic forward leaps, in terms of making large, bold decisions in the face of uncertainty. Dess, Lumpkin & Covin (1997) feel that entrepreneurial strategy reflects a bold, directive, opportunity-seeking style with elements of risk taking and experimentation. On the basis of such studies, risk taking can be viewed as an aspect of entrepreneurship that is related to, but separate from, other behavioural aspects.

By way of synthesis table 3 links the behavioural aspects with the five activities which are characteristic for early-stage entrepreneurship (new enterprise formation).

table 3. Relevance of behavioural aspects for activities in early-stage entrepreneurship

<i>Activities</i>	<i>Behavioural aspects</i>				
	<i>Creative behaviour</i>	<i>Taking initiative</i>	<i>Overcoming obstacles</i>	<i>Getting the job done</i>	<i>Bearing risk and uncertainty</i>
Opportunity perception	X				
Designing the product or concept	X	X	X		
Exploring the market		X	X		
Resource acquisition		X	X	X	X
Organizing process			X	X	X

### 3.2 Proactiveness

In firm-level entrepreneurship studies, proactiveness relates to pioneering (Covin & Slevin, 1991) and initiative taking in pursuing new opportunities or entering new markets (Lumpkin & Dess, 1996). It refers to the extent in which organizations attempt to lead rather than follow competitors in such key business areas as the introduction of new products or services, operating technologies, and administrative techniques (Covin & Slevin, 1986). These features are found at the individual level too. The organizational behaviour literature has identified work to become ever more dynamic and decentralized. In such a context employees' proactive behaviour becomes a critical determinant of organizational success. For example, as new forms of management are introduced that minimize the surveillance function, companies will increasingly rely on employees' personal initiatives to identify and solve problems (Frese, Fay, Hilburger, Leng & Tag, 1997). Some researchers claim that proactive behaviour is a high-leverage concept rather than a management fad, and that it will result in increased organizational effectiveness (Bateman & Crant, 1999). Companies are advised to focus on identifying and correcting policies and systems that would minimize and mitigate individual initiative (Frohman, 1997).

As with the early-stage entrepreneurial behaviours discussed above, theorists in organizational behaviour have stressed various employee behaviours related to proactiveness, resulting in a range of behaviours which are to some extent similar, but in other respects slightly different from individuals' entrepreneurial behaviors. From the organizational behavior literature we derived the following proactive behaviours:

1. Personal initiative
2. Taking charge
3. Issue selling
4. Voice

#### *Ad 1. Personal initiative*

Personal initiative (PI) is a work behaviour defined as self-starting and proactive that overcomes barriers to achieve a goal (Frese & Fay, 2001). One consequence of such an active approach is that the (work) environment is changed. This distinguishes it from passive approaches which are more usual in organizational behaviour studies, and which are characterized by behaviours such as doing what one is told, giving up in the face of difficulties, not developing plans to deal with future difficulties, and passively responding to environmental demands. High personal initiative enables people to deal with job difficulties more actively, for example, with stressors or becoming an entrepreneur (Frese & Fay, 2001).

According to Frese and Fay (2001), PI means to be a. self-starting, b. proactive, and c. persistent. Self-starting implies that a person does something without being told, without getting an explicit instruction, or without an explicit role requirement. Thus, PI is the pursuit of self-set goals in contrast to assigned goals. Frequently, initiative deals with sub-problems of an assigned task or with issues that are not obviously related to the task. It can be found in both high- and low-level jobs. An example would be a blue-collar worker who attempts to fix a broken machine even though this is not part of his or her job description, but also a middle manager who initiates a quality control program, even if he is not supposed to do so. Initiative in high-level jobs is difficult to define, because high-level managers are often required to show initiative as an external task; yet, PI can still be found when behaviours are proactive and self-starting (Frese & Fay, 2001).

Frese and Day (2001) regard proactive behaviour as a second dimension of PI, clearly demonstrating that their construct of PI is strongly related with proactiveness. Their definition of proactiveness stresses employees' having a long-term focus, not waiting until one must respond to a demand. Such a long-term focus on work enables individuals to consider things to come (new demands, new or reoccurring problems, emerging opportunities) and to do something proactively about them. Thus, problems and opportunities are anticipated, and the person prepares to deal with them immediately (p. 140).

The third dimension of PI is persistence. Individuals need to overcome barriers in order to reach their self-started and proactive goals. Generally, PI implies that something is changed: A process, procedure or task is added or modified. Changes usually do not work out perfectly from the very beginning; they often involve setbacks and failure. People affected by the changes may not like having to adapt to something new and being forced to abandon their routines. This requires persistence from the person taking initiative in order to pass technical barriers and to overcome other people's resistance.

Sometimes, persistence also has to be shown towards supervisors who do not like their subordinates going beyond the boundaries of their jobs.

#### *Ad 2. Taking charge*

Morrison and Phelps (1999) introduced the 'taking charge' construct to capture the idea that organizations need employees who are willing to challenge the status quo to bring about constructive change. Taking charge is defined as voluntary and constructive efforts by individual employees to effect organizationally functional change with respect to how work is executed within the context of their jobs, work units or organizations. At its essence, taking charge is change-oriented and geared toward improvement. It is similar to other forms of proactive behaviour in that it is discretionary (not formally required).

Taking charge is motivated by individuals' desire for organizational improvement and is not necessarily rooted in principles or beliefs that current practices are wrong or bad. In contrast with confronting behaviours such as whistleblowing and grousing, taking charge is aimed at implementing something positive. Morrison and Phelps (1999) motivated their introduction of this construct with the argument that proactive components of spontaneous, extrarole behaviour were underemphasized in previous academic work.

#### *Ad 3. Issue selling*

Issue selling has been introduced by Dutton and Ashford (1993) as a construct that indicates if managers strive to influence the strategy formulation process in their organization. It is defined as 'a voluntary, discretionary set of behaviours by which organizational members attempt to influence the organizational agenda by getting those above them to pay attention to issues...' (Ashford, Rothbard, Piderit & Dutton, 1998: p. 24). Managers who want to have a say in the strategies a firm follows can do so via proactive behaviours. Issue selling is voluntary and discretionary, and is presumed to take place early in the decision-making process. Dutton and Ashford (1993) presented a model of the timing, process, and success of issue selling attempts, noting that issue selling behaviours intend to exert upward influence, put down claims and impress others simultaneously. In the context of proactive behaviour, issue selling seems to be a relevant construct as it indicates if individuals dare to communicate and support identified opportunities.

#### *Ad 4. Voice*

Voice is defined as making innovative suggestions for change and recommending modifications to standard procedures even when others disagree (Van Dyne & LePine, 1998). It is a promotive behaviour that emphasizes expression of constructive challenge intended to realize improvements rather than to just criticize how things are done. Voice is particularly important when an organization's environment is dynamic and new ideas facilitate continuous improvement. It suggests change and is future-oriented, i.e. individuals with extensive voice behaviour are generally perceived to debit slogans like 'it can be done better...'. Van Dyne and LePine (1998) categorize voice as a proactive behaviour as it promotes, encourages or causes things to happen which are no part of the individual's daily work role. They note that voice is not always a proactive behaviour as some jobs require voice by default (e.g., auditors and devil's advocates).

### *Discussion*

It has been repeatedly recognized that the above-discussed proactive behaviours overlap conceptually (Crant, 2000; Morrison & Phelps, 1999; Parker, Williams & Turner, 2006). In particular, the constructs share a common behavioural domain. Each construct considers the way in which individuals approach and define their work role, focusing on efforts to realize improvements in the workplace. Thus, the conceptual underpinnings of each construct incorporate employees changing their work environment. We can therefore expect that the constructs are in practice strongly related; they may even constitute a single dimension of intrapreneurial behaviour. In this context Crant (2000) has already stressed that although related, various proactiveness constructs have almost never been tested in single empirical studies. Our future work will explore the dimensions of intrapreneurship and how they include constructs from previous work.

### 3.3 Innovative work behaviour

As discussed in section 2, intrapreneurship is supposed to contain an element of innovation. Innovation refers to the production, adoption and implementation of useful ideas, including the adaptation of products or processes from outside an organization (Kanter, 1988; Van de Ven, 1986). According to Kanter (1988), innovation at the individual level is a process that begins with problem recognition and the generation of novel or adopted ideas or solutions. Next, the innovative individual seeks sponsorship for the idea and attempts to build a coalition of supporters for it. Finally, these activities result in some prototype or model of the innovation that can be used by the organization.

De Jong (2007) defines innovative work behaviour (IWB) as individuals' behaviours directed towards the initiation and intentional introduction (within a work role, group or organization) of new and useful ideas, processes, products or procedures. This definition has been derived from Farr and Ford's (1990) definition of the related construct of work role innovation. The organizational behaviour literature reveals the following innovative behaviours:

1. Opportunity exploration
2. Idea generation
3. Championing
4. Application

#### *Ad 1. Opportunity exploration*

Innovation usually starts with the detection of performance gaps – mismatches between actual and potential performance. Literature shows that the realisation of something new begins with a person identifying opportunities (for instance Parnes, Noller & Biondi, 1977; Basadur, 2004). The discovery of opportunities may seem difficult, but some people do appear to be consistently 'lucky' implying that their exploration behaviour is different (Leonard & Swap, 2005). Opportunity exploration includes behaviours such as looking for ways to improve current products, services or processes, or trying to think about current work processes, product or services in alternative ways (see for instance Zaltman, Duncan & Holbek, 1973; Farr & Ford, 1990).

The start of an innovation process is often determined by chance: the discovery of an opportunity, a problem arising or a puzzle that needs to be solved. The trigger to

opportunity identification may be a chance to improve conditions, or a threat requiring immediate response. Sources of opportunity, as defined by Drucker (1985), relate to the factors that can initiate innovations: the unexpected (unexpected successes, failures or outside events), incongruities (gaps between 'what is' and 'what should be'), process needs (in reaction to identified problems or causes of failure), changes in industrial and/or market structures (changes in contemporary markets like rapid growth, re-segmentation, convergence of separate technologies, etc.), demographics (changes in population features like birth rates, educational attainment, labor force composition), changes in collective perceptions (manufacturing the pill for example was not a sensible business case fifty years ago, but nowadays it is) or new knowledge (scientific, technical or social, or combinations of the three).

### *Ad 2. Idea generation*

An idea is a necessary condition for innovation as it precedes the exploitation of opportunities. As Kanter (1988) states: 'Awareness of a need (opportunity) is one element; ability to construct new ways to address the need is a second' (p. 175). Mumford (2000) holds that ultimately individuals are the source of all ideas. Idea generation includes behaviours directed at generating concepts for the purpose of improvement. The generation of ideas may relate to new products, services or processes, the entry of new markets, improvements in current work processes, or in general terms, solutions to identified problems (Zaltman et al., 1973; Van de Ven, 1986; Amabile, 1988).

One very similar form of innovative behaviour, closely related with idea generation, is individuals' creative behaviour. The organizational behavior literature defines creativity as the production of new and useful ideas concerning products, services, processes and procedures (Amabile, 1988). Research on the creativity of individuals in organizations has rapidly increased in the last 20 years (Zhou & Shalley, 2003). West (2002) proposed that creativity could be thought of as an innovative behaviour, being most evident at the beginning of the innovation process when problems or performance gaps are recognized and ideas need to be generated in response to a perceived need for innovation. The key to idea generation or creative behaviour appears to be the combination and reorganization of information and existing concepts to solve problems and/or to improve performance. Rothenberg (1996), in his study of Nobel laureates, found that such new combinations often provide a basis for advances in science. Along similar lines, Mumford, Baughman and Reiter-Palmon (1997) found that skill in combining and reorganizing concepts is one of the best predictors of creative achievement.

### *Ad 3. Championing*

Once an idea has taken shape it must be 'sold'. Although ideas can have some legitimacy, especially when they fill a performance gap, it is uncertain if ideas will result in successful new applications. Only if creative ideas are marginal (appear off-the-field so they can slip in unnoticed) or idiosyncratic (can be accepted by a few people without requiring much additional support) they are easy to implement (Kanter, 1988). However in most cases innovative ideas face resistance. First, innovations are usually accompanied by new tasks or ways of usage. When ideas are proposed, recipients will first explore

how it will affect them or their functioning. In case their current knowledge and skills would be outdated, resistance is more likely. Second, people have a general tendency to perceive information selectively, i.e. consistent with their existing views. This implies that extremely innovative ideas receive no priority. A third source of resistance is a shared preference for familiar actions and events. People have a built-in tendency to return to their original behaviours, a tendency that sabotages change (Jones, 2004).

As a consequence there often is a need for coalition building in order to implement ideas. Champions are the ones who put effort into creative ideas. They are individuals in informal roles that push creative ideas beyond roadblocks in their organizations (Shane, 1994). Innovative individuals who take prime responsibility for the introduction of innovations are often not formally appointed, but rather those who feel strong personal commitment to particular ideas and are able to 'sell' it to others. Championing includes behaviours related to finding support and building coalitions, such as persuading and influencing other employees and pushing and negotiating (e.g. Zaltman et al., 1973; Van de Ven, 1986; Howell & Higgins, 1990).

#### *Ad 4. Application*

It often requires considerable effort from individuals to transform ideas into practical propositions. Application means doing what is needed to exploit opportunities. It includes behaviours such as developing new products or work processes, and testing and modifying them (e.g. Van de Ven, 1986; Kanter, 1988; West & Farr, 1990). To be an aspect of IWB, such behaviours need to be self-starting (doing something without being told or without an explicit role requirement) and persistent (overcoming barriers to bring about change) (Parker et al., 2006).

#### *Discussion*

Within the organizational behavior literature, it is striking that the majority of organizational behavior studies have treated proactive- and innovative behaviours without any crossreferences (one exception is Crant (2000) who regarded innovative behavior as one aspect of proactiveness). At first sight innovative behaviours seem to clearly overlap with proactive behaviours. This is most easily seen in our description of championing and application behaviours; such behaviours are also self-starting and proactive, and probably correlate with behaviours like personal initiative, taking charge, issue selling and voice.

Nonetheless it should be noted that proactiveness and innovativeness stress slightly different aspects of intrapreneurial behavior. Proactiveness studies do not capture the first, divergent stage of the entrepreneurial process: opportunities can only be exploited after they have been recognized, and after some sort of creative idea has taken shape (cf. Shane, 2003). In contradiction, the success of any intrapreneurial effort draws on individuals' ability to self-start implementation processes and to overcome barriers. Innovative behaviour studies do not go into the details of implementation as much as proactiveness studies do. This latter work seems to better cover exploitation issues by constructs like personal initiative, voice and issue selling. In all, the bottom line is that the similarities and differences between proactiveness and innovativeness can only be presupposed. One needs empirical material to explore the dimensions of intrapreneurship, an attempt we have planned for future work.

## 4. Conceptual discussion

### 4.1 Comparing the three literatures

In table 4 we have listed the various key behavioural elements in the three literatures. Early-stage entrepreneurial activity is summarized in two columns: business founding activities and business founding behavioural aspects.

A first observation is that early-stage entrepreneurial activity column 1 (business founding activities) and innovative work behaviour are conceptually similar in the sense that they both describe a sequential process. As will be elaborated below, it seems possible to distinguish between two or three phases in each. The content of some of the activities in business founding and innovative work behaviour is also similar. This holds in particular for opportunity perception vs opportunity exploration. There are also some differences in emphasis. The literature on innovative work behaviour lays more emphasis on idea generation as a separate activity, while that on business founding often views creativity as an integral part of opportunity perception. Other differences are the larger emphasis in the business founding literature on the exploration of the market, on resource acquisition and on the organizing process, while the literature on innovative work behaviour pays explicit attention to championing.

table 4. Key behavioural categories in three literatures

<i>Business founding activities</i>	<i>Business founding behavioural aspects</i>	<i>Proactiveness</i>	<i>Innovative work behaviour</i>
Opportunity perception	Creativity		Opportunity exploration Idea generation
Designing the new product or concept; Exploring the market	Taking initiative	Personal initiative; Taking charge	
Resource acquisition The organizing process	Overcoming obstacles Getting the job done; Bearing uncertainty and risk	Issue selling; Voice	Championing Application

A second observation is that proactiveness seems to overlap with several behavioural aspects of business founding. At first sight taking initiative and personal initiative are related, i.e. Frese and Fay (2001) regard self-starting and proactive behaviour as important dimensions of personal initiative. Likewise taking charge, issue selling and voice at least partly fit in with resource acquisition.

Thirdly, we argue that both early-stage entrepreneurial activity and innovative work behaviour *always* involve aspects of proactive behaviour. However, the other way around, proactive behaviour has a much wider application than opportunity pursuit and innovation, as it can also be meaningful in other organizational domains such as socialization, feedback seeking and career management (Crant, 2000).

Finally, in comparison with both proactiveness and innovative work behaviour, early-stage entrepreneurial activity implies a larger role for bearing uncertainty and risk.

To some extent risk taking may also be viewed as an inherent characteristic of innovative or proactive behaviour in the sense that individuals deviate from what is common and dare to stand up against the status quo, but obviously there is more at stake when founding an independent business.

#### 4.2 Synthesis: a conceptual model of intrapreneurship

First and foremost, we emphasize that intrapreneurship is a special case of entrepreneurship and thus shares many key behavioural characteristics with this overarching concept, such as taking initiative, opportunity pursuit without regard to presently available resources, and some element of 'newness'. At the same time, intrapreneurship distinctly belongs to the domain of 'employee behaviour' and thus faces specific limitations that a business hierarchy and an internal business environment may impose on individual initiative, as well as specific possibilities for support that an existing business may offer to a nascent intrapreneur.

table 5, we have integrated the various insights from the literatures on early-stage entrepreneurial activity (business founding), proactiveness and innovative work behaviour as well as from the emerging intrapreneurship literature as briefly discussed in section 2.

First, we distinguish between three stages of intrapreneurship. These are termed Vision and imagination; Preparation; and Emerging Exploitation. We make this distinction for both analytical and empirical reasons. Analytically, it formalizes the basically sequential nature of the various intrapreneurial activities. Empirically, this distinction helps to not overlook possibly relevant items for a measurement scale of intrapreneurship. However, we are fully aware that these stages overlap to a large extent, and that the perception of opportunity sometimes comes after various preparatory activities such as product design or networking (see Gartner and Carter, 2003). It is also clear that the borderline between Preparation and Emerging Exploitation is vague. Overall, we feel that Pinchot (1987) summarizes it well: 'Vision and imagination make up half of "the dreamers that do". Action is the other half'. These two core elements of intrapreneurship are strongly linked as imagination includes exploring possible barriers and problems facing the project and figuring out various solutions. To some extent, we will also find this dichotomy in other models distinguishing the stages of the intrapreneurial cycle such as 'exploration versus exploitation'. When three stages are identified, such as in table 5 or in the well-known threesome 'creation, initiation and implementation', in the first phase the emphasis is on vision and imagination, while in the latter two phases the emphasis is on action. However, obviously imagination does not stop when action has started.

Second, we maintain the previously made distinction between activities and behavioural aspects. The activities are practical actions in the business domain, such as preparing a project plan and internal resource acquisition. As stated before in section 3.1, the behavioural aspects indicate in which behavioural manner the various activities are carried out. These aspects include taking initiative and overcoming obstacles. The activities are summed up in column 1, the behavioural aspects in column 2. Finally, in column 3 intrapreneurship is delineated more accurately by specifying where it differs from independent entrepreneurship.



We add that neither the distinction between two or three stages, nor the enumeration of behavioural aspects in table 5 implies a preconceived choice between the possible dimensions of an intrapreneurial behavior construct. This is a challenge for future empirical research.

table 5. Stages, activities and behavioural aspects of intrapreneurship

<i>Intrapreneurship: activities</i>	<i>Intrapreneurship: behavioural aspects</i>	<i>Differential elements of independent entrepreneurship</i>
<b>VISION AND IMAGINATION</b>		
- Opportunity perception - Active information search - Idea generation	- Networking behaviour - Out of the box thinking - Recombining information	
- Designing the new product or concept	- Taking initiative	
<b>PREPARATION</b>		
- Voicing the idea with colleagues, external relations and potential customers	- Taking charge - Championing - Willful behaviour sometimes bordering at disobedience	- Talking to potential financiers and business partners
- Convincing the management		
- Forming strategic alliances inside and outside the firm (coalition building)		- Forming strategic alliances with other firms
- Market research - Developing and testing the product or concept		
- Preparing a project plan	- Imagining problems and their solutions	- Following workshops on starting a business - Writing a business plan
- Arranging finance from inside the firm	- Overcoming barriers - Finding a way	Investing personal financial means, finding external finance
		Arranging legal permits and administrative and fiscal aspects
<b>EMERGING EXPLOITATION</b>		
- Organizing a team	- Perseverance - Getting the job done	- Organizing start-up team - Hiring personnel
- Purchase of supplies etc		
- Arranging production		- Arranging housing, equipment, bank account, telephone, e-mail
- Marketing the new product or concept		
- Operationalizing the new concept and/or establishing first sales		
<b>PREPARATION AND EXPLOITATION</b>		
	- Risk of failure, loss of status, damage to career, loss of job	- Risk of bankruptcy, loss of money, low income, financial risk of illness etc
		- Legal ownership implying a higher degree of autonomy

### *Intrapreneurial attempts versus successful intrapreneurship*

Vision and imagination as well as active preparation are essential elements of intrapreneurship. One may however differ whether an emerging exploitation (such as first sales) is also a necessary condition for speaking of intrapreneurship. It appears meaningful as well as practical to distinguish between 'intrapreneurial attempts' or 'nascent intrapreneurship' on the one hand and 'successful intrapreneurship' on the other. It is again an empirical matter to find out to what extent entrepreneurial attempts actually complete all three stages of the intrapreneurial cycle.

### *Intrapreneurship versus innovative work behaviour*

We also note that intrapreneurship and innovative work behaviour are closely related concepts. In order to reduce future confusion between the two, we now attempt to separately delineate these concepts and indicate where they overlap and where they may differ.

1. Innovative work behaviour and intrapreneurship overlap insofar as both may refer to
  - innovative initiatives,
  - with a wider meaning for the business than one's own work only,
  - involving the overcoming of barriers and the acceptance of some risk.
2. Innovative work behaviour differs from intrapreneurship when the innovation is restricted to improving one's own work, or when no barriers or risks are involved. In these cases innovative work behaviour is usually more of a managerial than of an entrepreneurial nature ('improving things, given the resources available').
3. The other way around, intrapreneurship differs from innovative work behaviour when the project is not innovative but imitative (replicative), while still focussing on opportunity pursuit and involving a great deal of imagination and initiative to realize it. An example may be establishing a new outlet in another neighbourhood, region or country.

### *Alternative views on the relevant scope of intrapreneurship*

Even given the clarifications and delineations above, the concept of intrapreneurship nonetheless remains equivocal in the sense that there is a large conceptual diversity in the literature with respect to the relevant scope of entrepreneurial behaviour, which by definition also reflects on any intrapreneurship concept. Basically there are four alternative conceptual approaches. These are discussed below.

#### *Pursuit of entrepreneurial opportunity* (Shane, 2003; Stevenson and Jarillo, 1990)

Before, we have defined an entrepreneurial opportunity as a possibility for any recombination of resources that an individual expects to be profitable. Pursuit of opportunity may imply a new product or service, a new geographical market or a new production process in the widest sense. This view probably represents the broadest, most encompassing view of entrepreneurship, and is relevant for both independent entrepreneurship and intrapreneurship.

*New entry* (Lumpkin and Dess, 1996)

New entry includes entering new markets with new products, entering established markets with new products, or entering new markets with established goods or services. In the latter case, the venture may be characterized as imitative or replicative rather than innovative. The concept of new entry is particularly relevant for corporate entrepreneurship and intrapreneurship.

*Innovative entrepreneurship* (Schumpeter, 1934)

This view conceptualizes entrepreneurship as the introduction either of a new product or of a new process of production or distribution. This view is equally relevant for independent entrepreneurship, corporate entrepreneurship and intrapreneurship.

*New organization creation* (Vesper, 1982; Gartner, 1989).

The behavioural view of entrepreneurship as *the process by which new organizations are created* is well summarized by Gartner: 'entrepreneurship ends when the creation stage of the organization ends'. Following this specific view of entrepreneurship as 'new organization creation', intrapreneurship could be either innovative or imitative but should always be concerned with some sort of 'internal start-up' (such as establishing a joint venture, a new subsidiary, a new outlet, a new business unit, a new division or at least a new project team).

Without presently taking a final stance on the 'optimal' intrapreneurship construct, it is an interesting and feasible topic for empirical research to find out to what extent employee initiatives with respect to pursuit of entrepreneurial opportunity exclusively relate to new production processes and to what extent they lead to new entry in the abovementioned sense. In this future research, it will also be possible to investigate how often the pursuit of opportunity by employees from inside the business involves some sort of 'internal start-up'.

### 4.3 Related behaviours

Both the entrepreneurship and organizational behavior literatures mention other work behaviours which may be relevant in the context of individual-level intrapreneurship. We here elaborate on two of these behaviours, i.e. behaviour originating in psychological ownership in organizations (PO) and organizational citizenship behaviour (OCB).

#### *Psychological ownership in organizations*

There is a large literature on psychological ownership in organizations (Birger, 2008; Pierce et al., 2001). Pierce et al. (2001) define psychological ownership as the state of mind 'in which individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is "theirs" (i.e. "It is MINE!")'. Psychological ownership is distinct from legal ownership in the sense that legal ownership is objectively acknowledged and protected by the law, while psychological ownership is a subjective feeling. Legal and psychological ownership may evidently go hand in hand, but this is not necessarily the case.

Pierce et al. (2001) see three main 'routes' to psychological ownership in organizations. The first is having control of one's job, project or other organizational

factor. Control provides feelings of efficacy and effectance. The other routes are through investing one's time, ideas and energy in the specific organizational factor and through acquiring intimate knowledge of it. These latter routes contribute to enhancement of self-identity and to feelings of 'having a place'.

Psychological ownership also has behavioural effects. First, PO creates a perception of 'rights to information'. This may result in active information seeking behaviour. It also creates a sense of responsibility which have been shown to promote behaviours like stewardship and organizational citizenship behaviour (also see below). Second, PO moderates the reactions to change. According to Pierce et al. (2001), psychological ownership promotes self-initiated, evolutionary and additive change, but it produces resistance to imposed, revolutionary and subtractive change.

Although we have found no crossreferences between the literatures of intrapreneurship and psychological ownership, these two phenomena seem related. In particular, intrapreneurial activities, through control and autonomy, self-investment, and the acquisition of intimate knowledge, will often create feelings of psychological ownership of one's project. These feelings may in turn be conducive to further changes following from these activities, thus creating a virtuous circle strengthening an intrapreneurial initiative. In that sense, the intrapreneurial process may certainly harbour elements of psychological ownership<sup>11</sup>. However, at this point we do not expect an indispensable contribution from the psychological ownership literature to our conceptual model of intrapreneurship.

#### *Organizational citizenship behaviour*

Organizational citizenship behaviour is a special type of work behaviour defined as individual behaviours that are beneficial to the organization and are discretionary, not directly or explicitly recognized by the formal reward system. These behaviours are rather a matter of personal choice, such that their omission are not generally understood as punishable (Organ, 1988). OCB is composed mainly of two factors: compliance and altruism (Frese & Fay, 2001). Like proactive and innovative behaviour, OCB goes beyond direct role requirements, and can be seen to contribute indirectly to organizational effectiveness.

OCB yet has some distinguishing features which actually exclude it as an element of intrapreneurship. As mentioned, two forms of OCB are compliance and altruism. Compliance has a more passive connotation, for example, conscientiousness in attendance ('does not take extra breaks'), adherence to rules, and so forth. In contrast, the concepts of proactiveness and innovativeness imply ignoring or even being somewhat rebellious toward existing rules and regulations. OCB takes the framework of the supervisor as the starting point: How helpful is the worker from the supervisor's perspective? However, supervisors who are good at OCB may at the same time fail to support intrapreneurship and even punish active approaches. As for altruism, although conceptually related this is not necessarily self-started behaviour. For example, if a worker asks another for help and the second person complies, this is an act of altruism, but not proactive (Frese & Fay, 2001). However, if the second worker sees that the first

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<sup>11</sup> The other way around, psychological ownership of one's job may also stimulate intrapreneurship, at least insofar as the latter involves self-initiated, additive change. However, this reverse causation seems more speculative.

one is hopelessly behind schedule and offers help, this is both altruism and proactive behaviour. In addition, intrapreneurial initiatives may be very much self-centered and do not necessarily stem from altruistic motives.

We conclude that organizational citizenship behaviours are conceptually distinct from intrapreneurial behaviours, and should be no part of an intrapreneurial behaviour measure.

## 5. Conclusions

Intrapreneurship refers to employee initiatives in organizations to undertake something new for the business, without being asked to do so. While intrapreneurship is related to corporate entrepreneurship, these concepts differ in the following sense. Corporate entrepreneurship is usually defined at the level of organizations and refers to a top-down process, i.e. a strategy that management can utilize to foster more initiatives and/or improvement efforts from their workforce and organization. Intrapreneurship relates to the individual level and is about bottom-up, proactive work-related initiatives of individual employees.

As the detailed behavioural content of intrapreneurship is still uncharted, this paper has surveyed three relevant strands of literature in order to assemble relevant concepts and dimensions. First, intrapreneurship is a special case of entrepreneurship and thus shares its key behavioural characteristic with this overarching concept, i.e. opportunity pursuit without regard to presently available resources. We have derived relevant insights from the literature on early-stage entrepreneurial activity (business founding). At the same time, intrapreneurship distinctly belongs to the domain of employee behaviour and thus faces specific limitations that a business hierarchy and an internal business environment may impose on individual initiative, as well as specific possibilities for support that an existing business may offer to a nascent intrapreneur. Regarding those aspects, we have derived insights from two literatures on employee behaviour inside existing organizations, i.e. proactiveness and innovative work behaviour.

On the basis of these three literatures we propose to distinguish between concrete activities related to intrapreneurship on the one hand and behavioural aspects of these activities on the other. Major activities include opportunity perception, idea generation, designing a new product or another recombination of resources, internal coalition building, persuading the management, resource acquisition, planning and organizing. Key behavioural aspects of intrapreneurship are networking behaviour, out of the box thinking, initiative, taking charge, championing, willful behaviour, finding a way, getting the job done and some degree of risk taking.

As intrapreneurship is basically a sequential process, intrapreneurial activities may be grouped in three phases, i.e. 'vision and imagination', 'preparation' and 'emerging exploration'. This categorization is proposed for research purposes mainly. In reality these phases may overlap, and sometimes activities are partly carried out in recurring cycles and/or in a reversed order.

The paper also discusses the differences between intrapreneurship and independent entrepreneurship. Key differential elements of independent entrepreneurship are the investment of personal financial means and the related financial risk taking, a higher degree of autonomy, and legal and fiscal aspects of establishing a new independent business.

## **Appendix: Measurement, antecedents and consequences**

### **A.1 Measurement issues**

As previous work has mainly dealt with the organizational level, most of the current intrapreneurship or corporate entrepreneurship measures are at the organizational level too (e.g. Miller & Friesen, 1982; Miller, 1983; Covin & Slevin, 1986; 1991; Knight, 1997; Antoncic & Hisrich, 2001). In fact, we found no individual-level measure that is empirically validated and that claims to capture the domain of intrapreneurship. As a first step we gathered current measures of the aspects of intrapreneurship as described in the main text. In doing so we intend to cover the theoretical domain of intrapreneurship and obtain 'raw material' for a future measure.

As with many individual-level constructs, intrapreneurship can be treated as a trait, an output or a behaviour. One example of a related trait-based measure is the proactive personality scale (PPS) that was developed by Bateman and Crant (1993). The PPS identifies differences among people in the extent to which they take action to influence their environments. It regards proactiveness as a personal trait that is stable and given. Output-based measures would focus on the results or outcomes of intrapreneurship. Examples include counts of successful innovations (e.g. De Jong, 2007).

As discussed in the introduction section, we here aim for a behavioural measure of intrapreneurship. Behaviour-based measures are typically collected in field studies using multiple-item scales. They could be self-rated by individuals, but as a better alternative, peer ratings are obtained from supervisors and other colleagues (Zhou & Shalley, 2003). Trait- and output-based measures will rather be used for validation, i.e. to explore the antecedents and consequences of intrapreneurial behaviour and correlate these with intrapreneurial behaviour. The remainder of this section first presents existing state-of-the-art measures of (aspects of) entrepreneurial behaviour, proactiveness and innovative work behaviour, and on the basis thereof discusses possible items for measuring intrapreneurship.

#### ***A.1.1 Measuring entrepreneurial behaviour***

In the early-stage entrepreneurship (business founding) literature, researchers barely employ multiple-item behaviour scales for measurement purposes. They often put the exploitation of opportunities on par with starting a new business, i.e. measurement of entrepreneurship is done with counts of nascent entrepreneurs (as by the Global Entrepreneurship Monitor, see Reynolds et al., 2005) or new businesses within a particular time frame (Shane, 2003). Besides, whenever multiple-item scales are found, they are dominantly used for measurement at the level of organizations rather than individuals' behaviour. As a consequence we found only three measures which may be of use for our future empirical exercise.

#### ***Entrepreneurship in everyday life***

Van Gelderen (2000) asked 462 respondents to give an example of some entrepreneurial performance they had done in the past three years, and to indicate what was

entrepreneurial about it. Answers were classified both by realm of behaviour (work, volunteerism, leisure, housewife etc.) and by dimension of enterprise. These dimensions include among others being active/busy, independence/autonomy, initiative, risk/uncertainty, creativity, and planning/organizing.

#### *Entrepreneurial management*

An article by Pearce II et al. (1997) developed and tested an 11-item scale of entrepreneurial behaviour by managers. See table 6.

**table 6. Entrepreneurial behaviour items**

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Efficiently gets proposed actions through 'bureaucratic red tape' and into practice
Displays an enthusiasm for acquiring skills
Quickly changes course of action when results aren't being achieved
Encourages others to take the initiative for their own ideas
Inspires others to think about their work in new and stimulating ways
Devotes time to helping others find ways to improve our products and services
'Goes to bat' for the good ideas of others
Boldly moves ahead with a promising new approach when others might be more cautious
Vividly describes how things could be in the future and what is needed to get us there
Gets people to rally together to meet a challenge
Creates an environment where people get excited about making improvements

---

Source: Pearce II et al. (1997).

#### *Risk taking*

Most entrepreneurship and innovation studies regard risk-taking as an aspect of personality that measures people's willingness to engage in high-risk activities. We here classified it as an element of early-stage entrepreneurial behavior. Items that are used in measures of risk-taking propensity (e.g. Barron & Harrington, 1981; Patterson, 1999) can however easily be rephrased in terms of behaviours. For an example see table 7.

**table 7. Risk taking items**

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If large interests are at stake, I regularly go for the big win even when things could go seriously wrong.
I often take risks in my job.
I first act and then ask for approval, even I know that would annoy other people.

---

#### ***A.1.2 Measuring proactiveness***

Measures related to individuals' proactive behaviour include personal initiative, taking charge, issue selling and voice.

#### *Personal initiative*

Frese et al. (1997) developed a seven-item measure for personal initiative. It was based on Bateman and Crant's (1993) PPS measure; however, the items were a bit more behavioural rather than stressing personality traits. Answers were recorded on a five-point scale. All items were recorded for two groups of respondents, namely the individuals concerned and their spouses. The latter scale was used as a validity check. Self-reports were obtained from 497 respondents; spouse-reports were given by 220 respondents. It appeared that the measure was sufficiently reliable ( $\alpha = 0.84$  for self-reports and 0.80 for spouses) and unidimensional. The personal initiative items are shown in table 8.



**table 8. Personal initiative items**

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I actively attack problems.  
Whenever something goes wrong, I search for a solution immediately.  
Whenever there is a chance to get actively involved, I take it.  
I take initiative immediately even when others don't.  
I use opportunities quickly in order to attain my goals.  
Usually I do more than I am asked to do.  
I am particularly good at realizing ideas.

---

Source: Frese et al. (1997).

One important remark is that this measure only served to empirically validate an interview-based methodology to proxy initiative. Because of concerns about social desirability and common method bias, Frese et al. (1997) argued that using questionnaire measures alone is problematic. Using both interviewer judgments of behaviour and the above-mentioned measures they performed a longitudinal study. It was found that the interview technique had strong psychometric properties, and triangulated with the self-reported and spouse-reported measures. Frese and colleagues motivated their interview-based methodology with the argument that probing provides more precise and less socially desirable answers, while supervisor or peer ratings could be negatively biased as PI can be seen as rebellious (Frese & Fay, 2001: p. 152). Of course, alternative arguments can be given in support of a questionnaire-based methodology (representativeness, cost of data collection, etc).

#### *Taking charge*

Taking charge can be measured with ten items, to be completed by individuals, their leaders or colleagues (Morrison & Phelps, 1999). Respondents are asked to indicate (on a five-point agree/disagree scale) the degree to which each statement characterizes focal individuals' behaviour. Morrison and Phelps (1999) found this measure to be sufficiently reliable ( $\alpha = 0.93$ ). Preliminary assessment of the scale's psychometric properties showed strong reliability and adequate convergent and discriminant validities using a sample of part-time MBA students. See table 9.

**table 9. Taking charge items**

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This person often...  
...tries to adopt improved procedures for doing his or her job.  
...tries to change how his or her job is executed in order to be more effective.  
...tries to bring about improved procedures for the work unit or department.  
...tries to institute new work methods that are more effective for the company.  
...tries to change organizational rules or policies that are counterproductive.  
...makes constructive suggestions for improving how things operate within the organization.  
...tries to correct a faulty procedure or practice.  
...tries to eliminate redundant or unnecessary procedures.  
...tries to implement solutions to pressing organizational problems.  
...tries to introduce new structures, technologies, or approaches to improve efficiency.

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Source: Morrison & Phelps (1999).

#### *Issue selling*

Since Dutton and Ashford (1993) introduced the construct, issue selling has seen few applications in empirical work. We were not able to retrieve any behaviour-based

measure from the literature. Yet, Ashford and colleagues (1998) did propose a construct ‘willingness to sell issues’. In a survey among female managers, they applied a three-item measure that asked respondents about the amount of time, energy and effort that they would be willing to devote to selling an issue in their current organizations. The response format ranged from 1 (‘none at all’) to 7 (‘a great deal of effort, time or energy’). Reliability was sufficient in a pretest ( $\alpha = 0.77$ ) and excellent in their main survey ( $\alpha = 0.97$ ). After rephrasing the items into behaviours, we propose the following three-item scale (table 10).

**table 10. Issue selling items**

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In my organization...

- ...I devote a great deal of effort to selling my ideas.
- ...I spend much time on selling my ideas.
- ...I invest a great deal of energy to selling my ideas.

---

Source: based on Ashford et al. (1998).

#### *Voice*

Drawing on their earlier work, Van Dyne and LePine (1998) measure voice with a six-item scale. These items were measured on scales ranging from 1 (‘strongly disagree’) to 7 (‘strongly agree’). Drawing on data of 321 persons from 36 organizations, reliability measures proved to be satisfactory, i.e.  $\alpha > 0,80$ . The items can again be rated by supervisors or colleagues, or be self-reports.

**table 11. Voice items**

---

This particular worker...

- ...develops and makes recommendations concerning issues that affect this work group.
- ...speaks up and encourages others in this group to get involved in issues that affect the group.
- ...communicates his/her opinions about work issues to others even if his/her opinion is different and others disagree.
- ...keeps well informed about issues where his/her opinion might be useful to this work group.
- ...gets involved in issues that affect the quality of work life here in this group.
- ...speaks up in this group with ideas for new projects or changes in procedures.

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Source: Van Dyne & LePine (1998).

### ***A.1.3 Measuring innovative work behaviour***

At the individual level, measures of innovativeness usually capture behaviours like opportunity exploration, idea generation, championing and application. State-of-the-art measures are available for innovative work behaviour and creativity. We will also elaborate a measure for individuals’ risk-taking behaviour.

#### *Innovative work behaviour*

Based on an extensive literature review and two empirical studies, De Jong (2007) developed a multidimensional measure called ‘innovative work behaviour’ (IWB). As a source of items he used earlier measures including those of Scott and Bruce (1994), Tierney, Farmer & Graen (1999), Kleysen and Street (2001) and Janssen (2000). Answers were recorded on a five-point scale (‘never-seldom-occasionally-regularly-always’). The final version contains ten items related to opportunity exploration (two items), idea generation (three items), championing (two items) and application (three items). Reliability indices were good for both the overall scale and each of its dimensions

( $\alpha > 0.75$ ). Besides, application of confirmatory factor analysis indicated solid convergent and discriminant validity (table 12).

**table 12. Innovative work behavior items**

---

How often does this employee...

(opportunity exploration)

- ...pay attention to issues that are no part of his/her daily work?
- ...wonder how things can be improved?

(idea generation)

- ...search out new working methods, techniques or instruments?
- ...generate original solutions to problems?
- ...find new approaches to execute tasks?

(championing)

- ...encourage key organization members to be enthusiastic about innovative ideas?
- ...attempt to convince people to support an innovative idea?

(application)

- ...systematically introduce innovative ideas into work practices?
- ...contribute to the implementation of new ideas?
- ...put effort into the development of new things?

---

Source: De Jong (2007).

### *Creativity*

The literature mentions a range of measures for individuals' creativity in organizations. Examples include a three-items measure by Oldham and Cummings (1996), a nine-item measure by Tierney et al. (1999) and a 13-item measure by Zhou and George (2001). Their items predominantly relate to divergent behaviours such idea generation and the exploration of sources of opportunity. As an example, table 13 presents the items proposed by Tierney and colleagues (1999) ( $\alpha = 0.95$ ). They are phrased from a leader perspective but can obviously be reformulated to obtain self-reports or peer ratings.

**table 13. Creativity items**

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This employee...

- ...demonstrated originality in his/her work.
- ...took risks in terms of producing new ideas in doing job.
- ...found new uses for existing methods or equipments.
- ...solved problems that had caused other difficulty.
- ...tried out new ideas and approached to problems.
- ...identified opportunities for new products/processes.
- ...generated novel, but operable work-related ideas.
- ...served as a good role model for creativity.
- ...generated ideas revolutionary to our field.

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Source: Tierney et al. (1999).

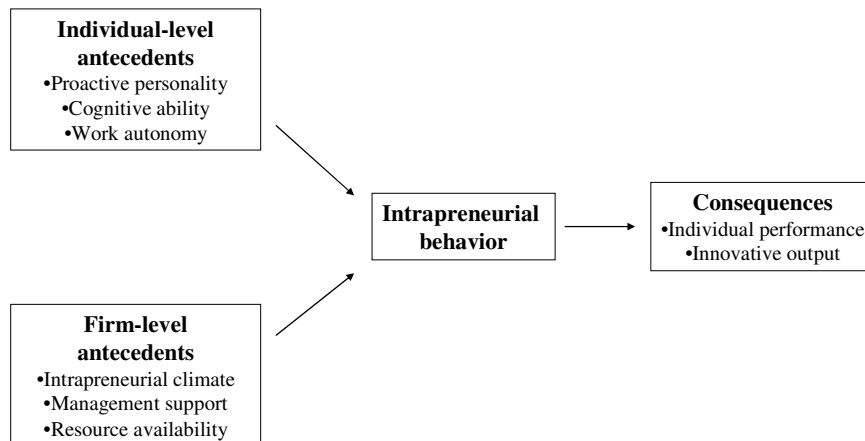
Not all creativity measures are based on multiple items. One alternative is Amabile's (1983) consensual assessment technique which uses expert ratings of the overall creativity of a solution or product. It provides a score for the quality of creative solutions. This technique is most popular in laboratory experiments. In field studies, multiple-item measures such as the one in table 13 are dominant (Zhou & Shalley, 2003).

## A.2 Initial nomological net

It is evident that the antecedents and consequences of intrapreneurial behaviour are not identical to those of entrepreneurial behaviour. The central fact that differentiates intrapreneurs from entrepreneurs is the context in which their behaviour occurs. Entrepreneurs discover and exploit opportunities for themselves while intrapreneurs also do it for the firm in which they are employed. In other words, while entrepreneurs interact directly with the market we can expect their personal traits and market features to be antecedents of their behaviour, but for intrapreneurs, their behaviour is also influenced by their organization and its people.

Previous work suggests a plethora of antecedent and outcome factors that are correlated with employees' intrapreneurial behaviour. For example, reviews of the determinants and consequences of proactive behaviour, innovative behaviour and risk taking point to antecedent factors such as individual traits, task features, and organizational/ environmental conditions including leadership, climate, rules and procedures and entrepreneurial resources. Relevant outcome factors would also be at the level of individuals, organizations and the wider society (Crant, 2000). In the current paper we do not present an exhaustive overview of all potential antecedents and consequences. Rather, we identify and discuss some frequently mentioned and often studied factors which make up an initial nomological net, with the objective to enable a future empirical test of the validity of an intrapreneurial behaviour measure. The proposed nomological net includes constructs at the individual and organizational level and is shown in figure 2.

figure 2. Initial nomological net



A future exercise to develop and validate an intrapreneurship measure would collect data on these constructs, and explore their correlations.

### A.2.1 Antecedents at the individual level

Drawing on the entrepreneurship and organizational behaviour literatures we identified three main constructs at the individual level which are frequently mentioned as antecedents of (aspects of) intrapreneurial behaviour: proactive personality, cognitive ability and work autonomy.

### *Proactive personality*

Our discussion of measurement issues already mentioned the possibility of exploring intrapreneurship as a trait, rather than a behaviour. Bateman and Crant (1993) introduced proactive personality as a construct that identifies differences among people in the extent to which they take action to influence their environments. They defined the prototypical proactive personality as someone who is relatively unconstrained by situational forces and who effects environmental change. People are not always passive recipients of environmental constraints on their behaviour; rather, they can intentionally and directly change their current circumstances (e.g., Buss, 1987; Diener, Larsen, & Emmons, 1984).

People with proactive personalities are expected to demonstrate more intrapreneurial behaviours. Research has established relationships between proactive personality and various entrepreneurial behaviours, including entrepreneurial posture and starting a business (Becherer & Maurer, 1999) and organizational innovation (Parker, 1998). In contrast, people with no proactive personality are expected to exhibit the opposite patterns: they fail to identify, let alone seize, opportunities to change things. Less proactive individuals are passive and reactive, preferring to adapt to circumstances rather than change them.

### *Cognitive ability*

Intrapreneurial behaviour can develop better if a person is good at his or her work and is able to learn quickly. Cognitive ability, i.e. individuals with high knowledge and skills, are expected to demonstrate more intrapreneurship. Empirical evidence for this proposition can be found in a wide range of studies. First, Amabile's (1988) work on creativity demonstrates that domain knowledge is an important requirement in order to generate ideas. In an eastern German longitudinal study, Frese and Fay (2001) provided evidence that cognitive ability affected personal initiative. Similarly, qualifications (as a summary measure of job knowledge and skills) are also related to personal initiative (Frese & Hilligloh, 1994). If a person knows to have the knowledge and capacity to deal with a work situation, he or she also knows that the outcome is controllable. When cognitive ability is high, dealing with anticipated changes, errors, and stressors is more easy.

In this context, Morrison and Phelps (1999) hypothesized that taking charge, one of the proactive behaviours in our inventory, is related with individuals' expert power. This construct is defined as the degree to which the employing organization is dependent on the employee for critical knowledge or skills. Because power implies greater discretion and credibility and less resistance from others, employees with a high level of expert power should feel more confident that they can bring about change successfully. Expert power is also likely to encourage taking charge by reducing the perceived costs associated with that activity. Relative to the employee with little expert power, one with a high level of expert power will be less likely to suffer organizational or group sanctions if he or she tries to initiate change. In all, we hypothesize that cognitive ability is positively related with intrapreneurial behaviour.

### *Work autonomy*

Autonomy, defined as the ability to determine independently how to do a job or certain task, has very often been associated with innovative work behaviour. Most of the evi-

dence relates to employees in organizations. Autonomous employees are believed to be better motivated and able to implement innovative ideas effectively, because they are in control and able to deal with bottlenecks during the implementation phase. Empirical support for these assumptions has been given by De Jong and Den Hartog (2005), Spreitzer (1995) and Axtell, Holman, Unsworth, Wall, Waterson and Harrington (2000).

Entrepreneurship literature barely mentions autonomy as a driver of opportunity exploitation. This is obvious as entrepreneurs are self-determining in most situations. Although we would not expect autonomy to be a bottleneck for them, the entrepreneurship literature does provide some findings that indirectly stress the significance of autonomy for the exploitation of opportunities. A well-known motive to become an entrepreneur, for example, includes 'a desire to be independent and enjoy the advantage of a free life' (Shane, 2003). In all, we anticipate a positive connection between perceived work autonomy and intrapreneurial behaviour.

### ***A.2.2 Antecedents at the firm level***

At the firm- or organizational level, three frequently-mentioned antecedents include intrapreneurial climate, management support and resource availability.

#### *Intrapreneurial climate*

Climate relates to the feelings, attitudes and behavioural tendencies that characterise organizational life (Nystrom, 1990). It is at the heart of the informal structure of a work group or organization. Groups can exert powerful pressures on individuals to adjust their behaviour. The more strongly an individual is attracted to a group and wishes to remain part of it, the more likely he is to conform to the majority view within the group. A deviant person will be subject to strong persuasive pressures and eventually, if he does not conform, will be excluded from the group (Tesluk, Farr & Klein, 1997). Thus, if norms and values in a work group prescribe 'intrapreneurship', individuals within that group will be triggered to be intrapreneurial.

Intrapreneurship will not always be welcomed by one's colleagues. Often highly proactive people are perceived by their environment as being tiring and strenuous. Every initiative "rocks the boat" and makes changes. Since people tend not to like changes, they often greet initiatives with scepticism, as the literature on organizational change has shown (e.g. Jones, 2004). Colleagues may even think of intrapreneurial employees as being rebellious. Research on issue selling has highlighted the importance of the social context of organizational behaviour (e.g. Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997). Individuals' perceptions of a number of factors influence their propensity to proactively sell certain issues to their managers. Psychological factors related to protecting one's image are particularly salient in this process. When people perceive risks to their image, such as when an action would violate organizational norms, they are unlikely to pursue an issue even if they firmly believe in its importance.

#### *Management support*

Leadership is an influential factor for those individuals in a subordinate position. There is actually much to say about how leaders (managers, entrepreneurs) affect the decision-making of their subordinates. In case of innovative work behaviour, direct management support is one of the relevant aspects (De Jong, 2007). Individuals' innovation efforts are

triggered by the provision of verbal support (e.g. Krause, 2004), recognition of innovative efforts (Judge, Gryxell & Dooley, 1997) and by enacted support i.e. providing resources to implement innovations (Judge et al 1997; Nijhof, Krabbendam & Looise, 2002).

In the corporate entrepreneurship literature, management support has been defined as willingness of managers to facilitate and promote intrapreneurial behaviour, including the championing of innovative ideas and providing the resources people require to take intrapreneurial actions. Kuratko, Montagno and Hornsby (1990) empirically explored the effectiveness of an organizational environment for the implementation of entrepreneurial ideas. They found that management support, defined as the willingness of managers to facilitate entrepreneurial projects, is one of the main dimensions of such an environment.

#### *Resource availability*

Resources and their availability are another element recognized in many writings on the determinants of intrapreneurship (Kuratko et al., 1990). Resources such as time, physical and financial means, are needed to enable the implementation of almost any opportunity. Organizational behaviour research has demonstrated that resources are critical to trigger individuals in organizations to start with and remain committed to innovative activities. As Janssen, Van de Vliert and West (2004) point out, the implementation of an innovation can be costly because getting acquainted with new ways of working will take extra work time of those involved. Entrepreneurial literature also considers resources to be a key aspect in opportunity exploitation. This requires the acquisition and recombination of resources before the sale or introduction of the output of that recombination (Aldrich, 1999).

#### **A.2.3 Consequences of intrapreneurship**

The final part of the proposed nomological net deals with the outcomes of intrapreneurial behaviour, or rather, what it yields. Two obvious consequences are individual performance and innovative output.

#### *Individual performance*

Plain intuition and past empirical research suggest that intrapreneurial behaviour will be positively related to individuals' performance in organizations. Despite the fact that intrapreneurs can be regarded as rebellious and sometimes annoying, their proactiveness and innovativeness is likely to result in better performance appraisals. For their construct of personal initiative, Frese et al. (1997) found that it related to developing better career plans, career advancement, and the perceived employability of employees. For voice behaviour, Van Dyne and LePine (1998) showed that voice was significantly related to estimates of individual performance by peers, the self, and by supervisors.

#### *Innovative output*

Another anticipated outcome is the 'creation of something new', an aspect that is central in most definitions of intrapreneurship (see section 2). In entrepreneurship research researchers often proxy the exploitation of opportunities with counts of new businesses, but in the context of individuals in existing organizations this is not possible. As an alternative intrapreneurial outputs could be assessed by drawing on objective sources such as patent counts, individuals' contributions to suggestions systems, new product

introductions or new projects (e.g. Scott & Bruce, 1994; Tierney et al., 1999). Scott and Bruce (1994) for instance reported significant correlations between innovative behaviour and independently rated counts of invention disclosures. Another option is to rely on individuals' self-ratings of their intrapreneurial outputs, e.g. suggestions and implementations related to new products and services, work practices, knowledge and markets (e.g. Axtell et al., 2000).



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