Evolving innovation through storytelling

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Abstract:
This paper explores a key challenge in innovation around how its might be articulated and communicated. Innovation is what entrepreneurs do but they may not always have the skills with which to articulate and share their vision and to build, revise and reshape it in the context of interaction with other stakeholders. Developing capabilities to enact this involves 'storytelling', making ideas explicit and engaging and allowing them to be elaborated and developed in context. Although the business plan is a robust device for capturing and codifying such information it can be criticised for being static, over-reliant on ex-ante information and requiring high levels of business skills in areas like finance and marketing to support its formulation. For inexperienced entrepreneurs there is a need for alternative approaches which provide a boundary object around which an evolving idea can be explored and across which supportive resource providers, end users and other stakeholders can be integrated. We report on continuing research within this group and highlight the need for training and new tools to help enable effective storytelling.

Keywords: teaching innovation; learning entrepreneurship; storytelling; boundary object

1 Introduction
A core problem in innovation is related to the early stage exploration and elaboration of innovative ideas. Articulating the initial idea, refining it, drawing others into the vision and gaining their support in the form of resources and commitment is a key part of this process [1]. Whether pitching to venture capitalists or making the internal case for a new project the process involves gaining the support and interest of others. It is essentially a
process of ‘storytelling’ – constructing a compelling narrative and inviting an audience to join with their imagination and possibly their active input in shaping and developing the story.

Models of the innovation process typically represent it as a funnel with a wide mouth of possibilities which converges – and the ‘neck’ of the funnel is essentially some form of review/selection point. Further iterations of this review follow during the life of the project; a typical stage-gate model will involve a series of increasingly difficult hurdles which innovators need to be able to jump in order to secure resources and commitment to move to the next stage [2].

The implication of this is that innovators need skills in developing and explaining the underlying narrative of their ideas – writing and telling the ‘story’. A number of writers draw attention to this aspect, making reference to entrepreneurship as a process of unfolding narratives [3-5].

Research around selection and resource allocation at the front end of innovation has provided a number of tools for idea assessment, portfolio management and continuing strategic review of projects as they enter and travel through the ‘innovation funnel’[6]. In the field of entrepreneurship there is a similar literature, much of it focused on the business case approach [7]. This literature provides a helpful starting point for reviewing the content of the ‘story’ as a coherent narrative which describes the idea and the way in which it should develop. Typically this will contain information about the idea, underlying technology/knowledge being utilized, estimates of the market in terms of target segment, size, growth, etc., some indication of cash flow over the life cycle of the project, some consideration of the likely challenges which might emerge and some description of how value will be created, captured and sustained over time.

Whilst comprehensive this business case model has a number of limitations. In particular:

- It assumes knowledge is easy to acquire at the outset and the challenge is simply one of assembling relevant and available information;

- It assumes that project development can be planned in systematic fashion and resources allocated accordingly;

- It assumes a level of skill on the part of the presenter to articulate and broadcast the message clearly;

- It presumes a homogeneous audience who will assess the project in rational terms, evaluating against clear and commonly accepted criteria.

In reality these conditions rarely apply. Uncertainty and lack of knowledge at the outset mean that business cases are founded on guesses and estimates. Further surprises will emerge during the uncertain process of development and so assumptions about project planning and resource allocation are likely to require modification. By its very nature innovation is uncertain and new concepts are adrift on a sea of uncertainty; much relevant knowledge is not unknown but unknowable at the outset. For this reason there has been a significant shift in recent years towards agile and lean approaches which involve controlled experiments and probes, hunting and converging towards a goal, allowing for
This ‘lean startup’ model is based on a probe-and-learn approach rather than a static project planning model and renewed attention is being paid to the role of experimentation and prototyping as enabling devices for this [9].

This reframing of the entrepreneurial challenge has implications for the way in which narratives are developed and elaborated. Seeing the process as ‘storytelling’ – the continuous unfolding and refining of a narrative – fits well with this ‘probe and learn’ model. Innovation begins with a simple idea but is then elaborated in the telling, taking into account responses and inputs from listeners and becoming modified by retelling by multiple agents. There are two fundamental differences between this and the business case approach. First, the process moves from a static ex ante framing to a dynamic and continuously evolving picture, and second, that it is built up collaboratively around a boundary object, drawing potential adopters and resource providers into the process.

This resonates with the effectuation model of entrepreneurship in which the entrepreneurial process is one of improvisation and elaboration in goal-directed fashion rather than the systematic working out of a master plan [10]. It places emphasis on the skills of the entrepreneur in developing a coherent vision and then sharing it with others, engaging their interest and support in the process [11].

2 The importance of storytelling in diffusion

Whilst there has been considerable interest in storytelling approaches and supporting tools at the front end of resource acquisition for innovation the approach also has considerable relevance for downstream adoption and diffusion. A second strand of relevant research concerns adoption theory and focuses on understanding how people react to novel proposals. Rogers’ seminal work still provides the backbone for this, using the lens of a communication process [12]. The perceived characteristics of the innovation message itself and the interaction between innovator and receiver are key influences on this predominantly social process. How well the story is told, the content of the story itself and shaping it to resonate with the target audience are all central to the process of building momentum. In the context of ‘pitching’ a new idea these factors provide a powerful framework for thinking about effective engagement of resource providers and supporters.

This perspective argues for tools which emphasize early learning with users, prototyping and other mechanisms for working alongside users to capture their insights and concerns. Dealing with the ‘compatibility’ factor early can smooth the downstream pathway to widespread adoption because the issues have been explored. It places emphasis on ‘boundary objects’ – ways of enabling co-creating and shared exploration. In effect prototyping around a boundary object invites the potential user to contribute to the development of the ‘story’, adding and elaborating and in the process taking ownership of the emerging narrative.

The role of prototyping as a stepping-stone to both improved innovation content and also to smoothing the path of downstream acceptance has been the focus of increasing interest [9, 13, 14]. It links with our earlier discussion of the changing entrepreneurial approach towards more agile models based on cycles of prototyping and learning [15, 16].
Linked to this is the idea of user-led innovation; engaging users early in the process and building their ideas into the developing innovation model strengthens its compatibility with their world and accelerates adoption [17]. This moves the focus towards the use of prototypes as boundary objects around which this process of user engagement can take place. Von Hippel’s pioneering work has led to extensive elaboration in recent years around how users can be brought in earlier and more effectively to the innovation process [17]. Models of ‘co-creation’ emphasise working with boundary objects and prototypes in the evolutionary fashion described above; a central feature of this is having some core ‘story’ on which to focus their suggestions. Crowdsourcing and crowd-funding platforms essentially rely on the co-creation and elaboration of stories across a heterogeneous population who are drawn into the narrative whilst simultaneously co-creating it [18].

3 Learning the craft of storytelling

From the above we suggest that there is a case for seeing the entrepreneurial process as one dependent on being able to articulate and elaborate a core narrative. This then raises the question of how best to do this. Building on the business case content mentioned earlier an increasing range for support tools have been developed which help provide structures for capturing and sharing the ‘innovation ‘story’. A good example is the popular Business Model Canvas which offers a structured framework for developing the ‘chapters’ of the story [19]. In essence the BMC involves a process of developing an explicit representation of how an idea can create value. Typically it requires thinking about key questions such as:

- Value proposition
- Value for whom – key target segments;
- Key channels to reach those market segments;
- Key relationships in reaching them;
- Key activities;
- Key relationships;
- Key resources;
- Cost structures in delivering;
- Revenue streams;
- Future development of the model and appropriability;
- Etc.

These can be seen as building blocks around which a story can be developed and then, as more information and experience is gained, elaborated and modified. All these elements would be part of a ‘conventional’ Business Plan for a new venture or an internal project case. The key difference in the BMC approach lies in two areas:

- Its systemic nature, identifying not only the component elements but also their interrelationships;
- its dynamic nature.
This approach offers – as in a physical model – a boundary object around which an increasing number of stakeholders can interact and explore how the idea can create value. In the early stage it may be the entrepreneur alone who has a vision and elaborates this in structured form into a business model. But in trying to explain it to others he/she needs to elaborate and explore, making the model both more robust and also changing it. The process of acquiring resources brings other perspectives into the mix – for example key knowledge holders, key sources of finance, etc. – and these players also interact around the boundary object. The Canvas functions as an evolving prototype, lending itself to the dynamic learning process outlined above and gradually making the initial vision one which is shared and supported by an increasing network of players, eventually including end users. Its particular value as a tool to support entrepreneurship lies on two directions:

- it is iterative, evolving as new information emerges and therefore lends itself to process of innovation in new ventures which is characterized by uncertainty reduction through learning and experimentation;
- it is available for sharing with others, bringing them into the discussion and allowing them to co-create the venture.

Such thinking can be approached in a number of ways and there are several powerful metaphors available to support this and expand the attractiveness of the concept to a wider audience. For example:

- the ‘business model canvas’ takes a painting/collage view, inviting stakeholders to elaborate a boundary object which is essentially a canvas on which ideas can be painted;
- Lego ‘Serious Play’ and other tools provide a physical version of this, representing ideas and how they create value via a form of sculpture around which people can interact and develop ideas. For example, Dumas uses the concept of the ‘totem’ as an integrating device in design thinking [20];
- Storytelling essentially uses the idea of a dramatic narrative to tell and retell the story, bringing in others as the story is told and elaborated [21];
- Futures/scenarios develop coherent interrelated ‘films’ in the manner science fiction which explore not only an idea but the context in which it is delivering value and how it got there [22].

4 Working with inexperienced entrepreneurs

Entrepreneurs are important for economic growth and it is increasingly recognized that they play a key role in social innovation as well. As a consequence there is growing interest in the ways in which entrepreneurship might be developed and enabled and this is a core policy issue for national and cross-national agencies like the European Union.

A key part of this challenge is that of ‘entrepreneurial capability’ (EC) – the ability to create value from an idea. Much recent policy emphasis has focused on ways of helping
develop these skills but many of these efforts have targeted groups like high tech spin-offs and business graduates – people for whom a subset of the core tools and skills is available or easily assimilable. It raises a question of how to enable skills development in inexperienced and potentially excluded potential entrepreneur groups. Examples in this category might include:

- Women entrepreneurs – for example mothers wishing to balance child care with the development of a flexible career by creating a venture which matches their lifestyle. We know this group is important but how to facilitate development of EC here when the core knowledge and experience base may be limited?

- Creative industries – research suggests the ability of these groups to translate and capture value is often limited by a lack of basic business and management skills and that part of the barrier is the language gap. ‘Creative’ people often resist business ideas because they assume such thinking constrains their creativity. The challenge here is how to make the underlying skills and concepts of effective entrepreneurship available to them in a form which they will accept.

- Social entrepreneurs may not immediately see what they do as entrepreneurship – their motivation is to change the world, contribute to their community, and make a difference. As a result their goodwill and enthusiasm is immense but their ability to execute often founders; once again the challenge is how to facilitate development of EC amongst this ‘naïve’ but high potential community?

- ‘Frugal innovation’ in which potential entrepreneurs see opportunities for serving markets at the ‘bottom of the pyramid’. Their ideas may be simple and robust but they often lack the ability to scale and diffuse their innovations.

- Humanitarian innovators whose concern and passion drives forward novel ideas for solving problems like sanitation, logistics and healthcare in crisis situations. Potential entrepreneurs here have plenty of ‘heart’ but may lack some of the ‘head’ skills to enable their innovation to happen.

- Potential entrepreneurs in contexts where there is little formal tradition of entrepreneurship and so limited access to role models, educational inputs or supporting infrastructure. Many emerging economies fall into this category including former communist countries in which at the extreme entrepreneurship was seen as a criminal offence!

As part of a continuing research programme we have been looking at examples of such inexperienced entrepreneurs in emerging market economies in Russia, Ukraine and Kazakhstan. We interviewed entrepreneurs and key players in the supporting infrastructure including development agencies and bankers and our studies highlight the

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fact that supporting and enabling entrepreneurship is not a simple matter of providing resources.

For example, in 2010 the Nizhny Novgorod (Russia) Ministry of Entrepreneurship offered grants for start-ups. “With the (projected) annual growth of 10,000 to 15,000 enterprises – we received only 300 applications. 100 applications were rejected at the stage of submission for the reason that entrepreneurs didn’t read the rules and submitted documents that didn’t address the requirements. Out of 200 accepted applications – 187 entrepreneurs gained grants”. Criticism of the quality of applicants was common – for example, one of the interviewees from the Ministry commented: “Entrepreneurs are reluctant to submit 4 documents to apply for the financial contest. Even if they submit an application, they are careless and negligent with documents and blame the government for their own mistakes”.

Other interviewees felt that many entrepreneurs prefer to “distance themselves from the Government, they don’t want to read the laws, they don’t want to accept measures of support that are offered”. In other words the problem lies with the entrepreneurs….

From the entrepreneur’s side the process is seen as mired in bureaucracy with resource providers having little understanding of the underlying ‘story’ but rather requiring a dry set of documents which have to be filled in. One of the key requirements to get governmental financial support is to provide a concept business plan – addressing basic questions. There is template of a business plan provided by the Ministry that contains only eight pages and includes cash-flow, tax, profit, marketing, production, personnel – that entrepreneur should be aware of about his or her business. However, although it officially means it is quite easy to obtain support, entrepreneurs have a different view. The problem is that the entrepreneur “needs to know everything, from A to Z, including aspects of dealing with ‘infrastructure’, i.e. the law, tax, accounting, banks – and these organisations all have their rules and requirements”, as claimed by one of Russian entrepreneurs.

Sometimes the working day of the entrepreneur is not about ‘doing business’ but around dealing with ‘infrastructural’ organizations. The day might start with the bank – where the entrepreneur has to bring all sorts of documents supporting the cash-flow, then the tax agency where they have to go to get documents from to provide back to the bank to confirm their cash-flow (which looks like a merry-go-round), then there are also sanitary inspection, fire brigade inspection, municipal service and utilizes, such as energy, water, central heating – the list is endless – and everywhere they have to pay and provide all sorts of documents.

If they make a mistake they are penalised. “You could hardly start your business – and already get penalties. The most ridiculous thing when ‘they’ introduce a new law and you can get penalties for not paying it – when you didn’t yet start your business. And you need to go and prove that you didn’t exist at that time. In banks, tax agency – ever so often people don’t know what they are doing – they need to learn first” – many entrepreneurs blame bankers and tax bodies. One of the interviewees in the Ministry summed up “Entrepreneurship – is a very hard work. I did have a thought of becoming an entrepreneur – but looking at their work – they are all workaholics – they work from
morning till night – I am a person who is not ready to run my own business yet; I am not ready to run this risk, I have a family”.

Bankers in Russia suggest that one of the major reasons for financial challenges that entrepreneurs encounter is the lack of knowledge and the desire to learn. As we were explained: “As a rule, banks offer a variety of products but, most often entrepreneurs are unaware what opportunities we can open for them. For the moment, all initiatives are coming from the banks – we provide workshops, seminars, trying to explain banking products”. Interestingly, bankers from the credit departments echo interviewees in the Ministry by saying that “there is a strong illiteracy among entrepreneurs and the lack of good knowledge. When, at the stage of a credit application we ask about their profit – entrepreneurs can say about daily or weekly profit only. No one does foresighting or proper business-planning. If you an entrepreneur you should analyze your cash-flow and know at which stage you need a credit. A regular thing, they run into the office and say: “Give us a loan instantly or the business is in danger”. Instead of this, they should analyze and foresee at the beginning of the financial year how their business might change with each month. We even try to help them that they need ‘this sum’ as a credit rather than the one they ‘thought of’ – we teach them about seasonal fluctuations, NPV, IRR. The sad fact is that they have no clue about their business determinants”.

To sumarize, these sketches suggest that entrepreneurs are often inexperienced in key areas and fail to understand the ways in which businesses can develop. They lack language and concepts which would enable them to engage with suppliers of key support resources. On the supply side many agencies have resources and often there is even preferential allocation - the desire to promote innovation as part of national or company policy. What is missing is the language around which new ventures can be presented and explored – the agencies blame the entrepreneurs for their lack of skills.

Arguably this represents a context in which bridging devices and boundary objects could play a key role in helping develop the skills and underlying language on the part of the entrepreneurs and enabling the to communicate more effectively with the support agency or resource provider on the other. But the current mechanisms for this – business plans and associated documentation – are seen as clumsy, bureaucratic and an obstacle course rather than an enabling device. It is in this boundary space that we suggest alternative approaches based around storytelling (using tools like BMC and scenarios) could be relevant and our current research is focused on exploring this potential.

5 Storytelling approaches to help support inexperienced entrepreneurs

As discussed earlier, ‘pitching’ is a difficult process for the experienced innovator but for inexperienced entrepreneurs it can be a major block. First they lack the basic skill set – learning to organize relevant information and present it concisely and persuasively is not simply a matter of assembling some data. The process of presenting and convincing others is one full of drama, as the success of television series like ‘Dragon’s Den’ indicate. Trying to imagine the various challenging questions, developing rapport with different judges, finding a way of cutting through the noise and getting to the heart of the proposal and ensuring that all the relevant facts are available to deal with a wide range of technical, market and other questions involves a sophisticated skill set. Not surprisingly much of the focus in supporting entrepreneurs has been concentrated around this, providing structured guidance to help develop rich and well-informed business cases,
rehearsing pitching and the skills associated with it and providing close mentoring and coaching of inexperienced players with good ideas.

The core entrepreneurial process is well understood in terms of what takes place, classically breaking down into phases:

- Opportunity recognition;
- Acquiring resources;
- Developing the venture;
- Capturing value.

Problems occur because these stages involve complex interaction and the process is one of co-evolution with multiple stakeholders under conditions of high uncertainty. For inexperienced entrepreneurs this raises questions about how to work through the process and imagine and prepare for the high uncertainty.

As we have seen, there are many tools and techniques to help entrepreneurs deal with these challenges as they emerge and much is made in ‘conventional’ entrepreneurship studies of the Business Plan (BP) as a focusing device. This framework challenges entrepreneurs to think through different aspects of their idea and how it will create value – by considering markets, costs and revenues, cash flow, etc. The BP also provides a device for communicating the innovative idea to resource-holders – for example venture capitalists – who will buy into the idea or not.

Whilst robust and of considerable value there are several limitations in the BP approach:

- It assumes a familiarity with the concepts in business like cash flow, markets and channels, etc and is designed to communicate in this fashion with other equally knowledgeable/business literate people;
- It is essentially static, an artifact which captures at a moment in time the information which is available (or best estimates where this is not);
- It is prospective – trying to create a structured picture of something which does not yet exits and to elaborate it on the basis of the mixture of facts and estimates.

Approaches like ‘lean startup’ recognize that new ventures are highly uncertain and that the process of developing them provides opportunities for learning which need to be built into the plan. The process becomes much more dynamic and interactive; as new stakeholders come into the picture, as new information or challenges becomes available, so the business plan is continuously modified. The idea of ‘discovery driven planning’ and of agile experimentation, modification and testing lies at the heart of such approaches and they provide a more dynamic version of the BP.

The nature of entrepreneurship in this model is one of gradual adaptive learning, responding to changes with changes in direction and even modifications to the core underlying vision. This concept of ‘effectuation’ is receiving considerable interest and support and it plays out in key observed phenomena like the ‘pivot’.

As we noted earlier approaches like the Business Model Canvas (BMC) offer a boundary object around which an increasing number of stakeholders can interact and explore how the idea can create value. In the early stage it may be the entrepreneur alone who has a vision and elaborates this in structured form into a business model. In trying to explain it
to others he/she needs to elaborate and explore, making the model both more robust and also changing it. The process of acquiring resources being other perspectives into the mix – for example key knowledge holders, key sources of finance, etc. – and these players also interact around the boundary object. The BMC functions as an evolving prototype, lending itself to the dynamic learning process outlined above and gradually making the initial vision one which is shared and supported by an increasing network of players, eventually including end users.

Developing a story using BMC or other approaches is thus a valuable extension of the business plan concept, particularly in the direction of making it more dynamic and facilitating continuing learning. It provides a boundary object around which increasingly diverse actors can interact, elaborating the model in the process. This creates a way for inexperienced entrepreneurs to engage in the process and interact with others across the platform. For example, asking a creative person to develop a cash flow forecast or analyze their cost structure in ways which a potential VC might fund is difficult, but if they engage in telling their story – who are the actors, how is the business funded, who pays for what, why they lie asleep at night worrying about money – the idea comes alive and can be explored from both sides.

Our current research involves testing out the use of storytelling approaches amongst a sample of inexperienced entrepreneurs in several different contexts - in emerging economies, amongst social entrepreneurs and with students. We are evaluating different storytelling tools and supporting frameworks (including innovation theatre, scenarios and simulation, design thinking laboratories and variants on BMC approaches) and developing a methodology through which the use of such techniques can be embedded as part of entrepreneur training and support.

5 Conclusions and next steps

We have explored a key challenge in this paper around how the content of entrepreneurship might be articulated and communicated. Innovation is what entrepreneurs do but they may not always have the skills with which to articulate and share their vision and to build, revise and reshape it in the context of interaction with other stakeholders. Developing capabilities to enact this involves ‘storytelling’, making ideas explicit and engaging and allowing them to be elaborated and developed in context. Although the business plan is a robust device for capturing and codifying such information it can be criticised for being static, over-reliant on ex-ante information and requiring high levels of business skills in areas like finance and marketing to support its formulation. For inexperienced entrepreneurs there is a need for alternative approaches which provide a boundary object around which an evolving idea can be explored and across which supportive resource providers, end users and other stakeholders can be integrated.

There is a need for further research in this space in terms of articulating more clearly the specific challenges faced by different groups of inexperienced entrepreneurs – where do they find difficulty in telling their stories and how might these challenges be dealt with through both training and the availability of suitable tools? And there is a need to extend the available toolkit, looking at different modes of storytelling and the contingencies under which these work.
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