

Innovation in the arts – lessons from the creation of Dalhalla

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Abstract

This article employs seven innovation perspectives and an etymological study of innovation, together with a case study on how Margareta Dellefors created Dalhalla in Sweden, an opera and classical music arena. Because of the combination of nature and art, Dalhalla gained world fame. The case study opens Schumpeter's black box "creative destruction" and it deepens the understanding of barriers and stimulating factors. The analysis includes a new model of innovation.

Keywords: opera scenes, classical music arenas, innovation, fundraising, music marketing

1 Introduction and research questions

Innovation is crucial for progress in many parts of society including the arts. Although it is not unexpected that many innovation theories have emerged in the literature, most focus on business firms and technology. Moreover, the term, innovation, is not always defined. This article attempts to deepen the understanding of innovation, both at a general and specific level, although its focus is limited to one specific part of the arts, namely arenas for opera and classical music.

Three research questions were formulated in this project: 1) What was the original meaning of the innovation concept? 2) What shape can innovation have in the area of opera and classical music arenas? 3) Which barriers as well as stimulating factors affect innovation processes in the context of novel arena creations?

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2 Method

The research is based on an in-depth case study of the Dalhalla creation process, with an empirical timeframe between 1990–2017. The research approach used is triangulation (Webb 1966), i.e. combinations of methods to cover different aspects of the phenomenon studied (Campbell & Fiskel 1959). The methods employed were personal communication, document studies and physical observations. The empirical work began on 31 August 2001 and ended in August 2017. Primarily it included personal communication.² The most important source of information was Margareta Dellefors. About 5–10 interviews per annum took place alongside many informal conversations. The empirical work was conducted in Falun, Rättvik, Stockholm, and San Francisco.

Regarding the document studies, substantial amounts of archival material have been used, including letters, applications, legal documents and articles, as well as audio-visual media. Physical observations were made not least at the Dalhalla site in the Dalarna region, Sweden. This site was visited many times over the research period, and a Leica camera, alongside notebooks for documentation, was the primary research tool. Not least, there were different concerts and details in and around the documented arena.

3 Theoretical framework

The theoretical basis is a selected spectrum of innovation theories derived from an analysis of the international innovation literature. From the 38 innovation perspectives identified by Frankelius & Gidlund (2003) ten main perspectives on innovation during the last 130 years were established. Seven of these will be used in the subsequent analysis of the empirical case.

² Among the respondents were Håkan Ivarson (former CEO of Dalhalla Production AB), Barbro Osher (financial sponsor), Maria Norrfalk (County Governor in Dalarna), Ulf Lundén (culture journalist, Dalademokraten), David Lundblad (director, Dalasinfoniettan) and Lena Adelsohn Liljeroth (Swedish Minister of Culture). Part of the empirical material was presented in Frankelius (2011) and Frankelius (2013).

The first perspective is the *diffusion theory*, originated by the French sociologist Gabriel Tarde who analysed social changes in his book *Les Lois de l'Imitation* (1890), which showed that only a small share of all inventions spread across society. A key observation was that the diffusion of inventions that spread was, at first, slow and then increased before fading away. His explanation of why the process, after a while, kicked off was that as soon as opinion leaders in a social system began to embrace the new innovative concept, many others followed. This line of research was taken up by Ryan & Gross (1943) with a focus on agriculture. Rogers (1962: 13) summed up the diffusion perspective by defining innovation as "*an idea perceived as new by the individual*", adding: "*It really matters little ... whether or not an idea is 'objectively' new as measured by the amount of time elapsed since its first use or discovery.*" According to the diffusion perspective an innovation phenomenon starts with information about something new that comes to a potential external adopter.

Another theoretical perspective on innovation, termed the *Great-Man theory* (see e.g. Nietzsche 1881; Schon 1963; Burgelman & Day 1994), in which individual creativity was at the core, saw innovation as rare events and the results of flashes of brilliance. Factors such as experience, skills or resources besides the mind needed to make the "flashes" happen, were not central to this theory.

According to sociologists such as Ogburn (1922) and Grilfillan (1935) inventions (their research focus) were not the results of great minds but rather partly due to the great need as well as partly to a result of a multitude of efforts by many people. Every effort in this complex wholeness consisted of an uncreative act so the driving force was not the individuals as such, but rather society's development as a whole. This third perspective in the theoretical spectrum can be called *collective determinism*.

Schumpeter (1912 and 1939) studied the role of *innovation in economic development* and this is the fourth perspective, whose basic idea was that the economy could be divided into routine and development modes. In the routine mode only small improvements to products, ser-

vices and processes occur. From time to time, however, dramatic development takes place triggered by innovation. Innovation was about radically new methods for producing known products or developing completely new products. The factor that created innovation was entrepreneurs, and one main problem was to persuade the bank to give investment loans. Only a few people, the innovating entrepreneurs, had the capacity to produce innovations. However, innovation was almost only described in very abstract terms, like "*neue Kombinationen durchgesetzt*" (new combinations) of productive resources (Schumpeter 1912: 173) or "*creative destruction*" (Schumpeter 1942: 83).³ The creative process behind innovation was a black box in the theory (Ruttan 1959).

In the 1960s the *innovation processes models* were formulated (Arrow 1962; Cooper 1971), which are the fifth perspective. In this perspective innovation was regarded as a linear, rational and rather deterministic process starting with market signals and/or R&D and ending up in a product or production method. Thus, the end-point in the innovation process is a product or production method, although its focus was on isolated projects within the framework of specific (large) companies and a key term was innovation management (Drucker 1954). One conclusion from the empirical studies was that understanding potential customer's needs, the marketing concept, was most important for success (Science Policy Research Unit 1972; Foxall 1984). As shown by van de Ven (1986) various people were often involved and there could be many disputes about different destinations during the innovation journeys. Management models derived from the process model theory turned to be the stage-gate model (Cooper 1983) and the innovation funnel (Wheelwright & Clark 1992).⁴

Inspired by biology, *evolutionary theories* on innovation emerged, used here as the sixth perspective. Key concepts within this included

³ According to Reinert (2006) was it not Schumpeter but Werner Sombart who coined the phrase "creative destruction". This was made in *Der moderne Kapitalismus*, 1902.

⁴ Because services became more central in many industries it was natural that Miles (1993) pinpointed service innovations. Miles related special features and problems of services with particular types of innovations. For example, he discussed innovations to overcome the difficulty in describing a service to a client.

variation, selection, and retention, and much of focus was on the market and competition at an abstract level (Nelson & Winter 1982). Variation, according to the theory, is mostly due to technological innovation, while selection is determined by the market, and retention is mostly affected by public institutions (Nelson 1994). The evolutionary theories focused on three different aspects depending on author, with the first the variation, selection, and retention mechanism, the second gradual development, or the "incremental view" and the third the importance of the external world on internal processes.

Research on social change more generally, during the 1960s inspired some researchers to focus on the openness of innovation processes, looking at the context as co-producer of innovation. Callon (1986) used the term translation in contrast to diffusion, because the adopter, user or customer of some innovative concept also modifies the concept in some way. This was a step towards the *open innovation perspective*, which is the seventh and final perspective.⁵ Eric von Hippel (1988) focused on users and customers rather than developers. But yet the company (large manufacturers) was the central object of analysis. Chesbrough (2003) wrote about opening up a company's re-search and development department to professional collaborators, but not primarily customers, in the outside world to integrate them into innovation efforts.

Understanding innovation etymologically can be helped by means of an article from 1967 in *Times Review of Industry & Technology*⁶:

"Nylon, for instance, was first invented in 1928, but not innovated until 1939; Xerography was invented in 1937, but not taken up until

⁵ Other main perspectives on innovation include the *science push paradigm* (Bush 1945), inside the *black-box theory* (Usher 1954), and the *innovation systems theory* (Freeman 1982; Nelson 1987; Dosi et al. 1988). These will not be used here.

⁶ The citation appears in a book review entitled *Innovations* concerning the book *Scientific Innovation and Industrial Prosperity*, by J. A. Allen (1967). The first review in the book's section of the journal (1967: 83–86) is written by Charles Stuart-Jervis. He is probably also the author of the others, none of which are signed. I am grateful to Colin T. Clarkson, Head of the Reference Department at Cambridge University Library, for helping me with this information.

1950; even television, claimed to have been invented by Zworykin in 1919, was not really developed until Westinghouse took it up in 1941."

Regarding the Nylon example, the above citation referred to 1939, as the year the DuPont company started commercial production and sales of the new material.⁷ Innovation, according to this source, is about something original that not only appears, but also comes into use, in this case on a market. The example here also illustrates a common focus or assumption regarding innovation; that it should relate to technology, or as Godin (2015: 2) writes: "... our current or dominant meaning of innovation" is "commercialized technical invention". This might be partly true, but not all innovation relates to "technology".

According to the *Oxford English Dictionary* (2002) one of the first to use the term innovation in the English language was King Edward VI, in 1548. The meaning of the term was "a change made in the nature or fashion of anything; something newly introduced; a novel practice, method, etc." The concept is related to the verb innovate, which has its oldest documented use the same year, 1548, in a publication by John Udall. The meaning of innovate was: "To bring in (something new) the first time", or "to introduce as new" (*Oxford English Dictionary* 2002). The central concept was that something new is introduced into society, and that it has originality. Udall himself referred to examples of innovation in the form of new types of words coming into use.

The English concept of innovation was historically derived from other languages, with a link to the Latin terms *innovatio* (renewal), *innovatus* (renewed) and *innovare* (renew). These Latin terms were probably in turn derived from the Latin term *novae* (create new) and *novus* (new, fresh, young). Something new, fresh and young was called *res novae* in Latin, a term Morwood (2005) tracked the term innovation to. This phrase was often used by the lyric poet Quintus Horatius Flaccus, also known as Horace, (65-8 B.C.) and his contemporaries (Wagenvoort 1956). Through the context in which the term is used, there is clearly a reference to something new and revolutionary for many people. Accord-

⁷ The first to buy and use new things was probably female shoppers in Braunstein's department store in Wilmington in 1939 (Kinnane 2002).

ing to this explanation, it is not sufficient for something to be new to be described as an innovation; it must also be revolutionary relative to what already exists.

However, some analysts do not agree with this interpretation (cf. Frier 2008) arguing an innovation must be new, but not necessary revolutionary. Even so, the fact that the two concepts innovation and revolution are etymologically related, may support the former interpretation (Morwood 2005).

The concept of innovation, thus, has its roots in Latin. But there are still earlier roots found in the Greek language (Alga, Barnes, Mansfield and Schofield 1999). One of the old Greek words related to innovation was *kainotomia* used by Aristophanes in a comedy ca 422 B.C. (D'Angour 1998; Hall 2007; Aristophanes 1971). The word is derived from *kainon* (novelty) or *kainos* (new) and appeared in a time of great progress in Greece, and in this context, it was easy to make fun of those who proposed or made new things in different areas. Therefore, it is not surprising that the word appeared in a comedy. While society was marked by renewal and innovation, tradition was, paradoxically, seen as having a higher standing. Algra et al (1999: 22) wrote: "*Originality or novelty (kainotomia) was a dirty word; the various philosophical schools tended to consider themselves (or were considered by others) to belong to the general tradition of Greek philosophy and to depend on past masters*".⁸

One can deduce an even older root to the concept of innovation in the Greek word *palingenesia* (D'Angour 2009). It was used perhaps the first time by the philosopher Democritus born in Abdera, ca. 460 B.C. He related the word to the idea that every human will wake up every morning with the ability to think new thoughts. Therefore, D'Angour inter-

⁸ The word *kainotomia* as such was part of the Greek language before Aristophanes, but he began using it in a new way, with a meaning that is akin to innovation. Before Aristophanes' new interpretation the word *kainotomia* meant to cut new channels in a mine for the extraction of precious metal (D'Angour 2009). The extraction of silver from the mines of Laurion was a real and important source of economic prosperity for Athens. What Aristophanes metaphorical use of the word meant was, as I understand it, that innovation is about to find or create new ways that lead to some kind of value. But, as said, Aristophanes, made fun out of it.

prets the meaning of the word *palingenesia* as an absolutely new beginning.⁹

Fig. 1 shows some of the roots discussed.

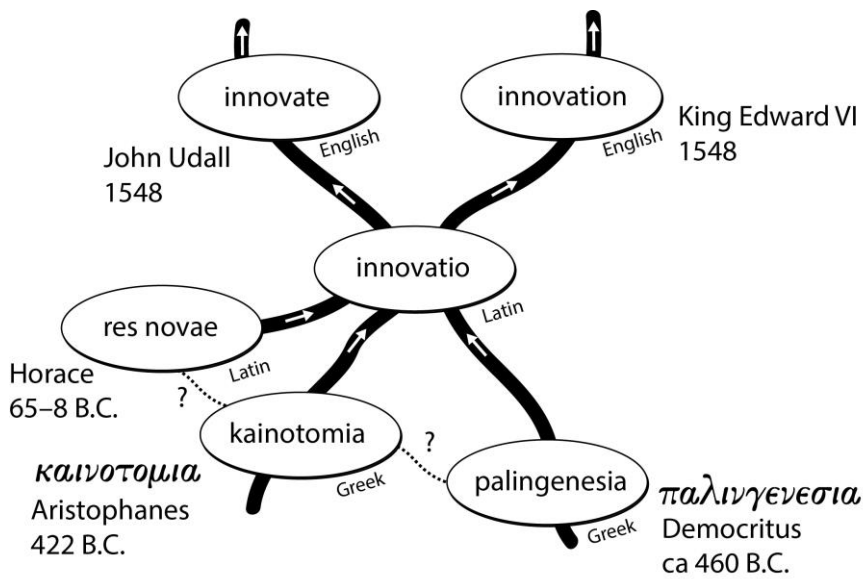


Figure 1: Some roots of the term innovation

In conclusion from the etymological study in combination with previous research (Frankelius, 2009), innovation, is something, in whatever area of society, that at the same time is 1) new in the sense it has high degree of originality, 2) also obtains a foothold in the community often via a market, 3) is perceived as revolutionary in the eyes of many people, and 4) appears at a specific point of time. Innovation can therefore be

⁹ The concept of "new" has different meanings. Something new could be either something associated to a) previously unknown concepts or b) a concept, with whatever originality, appearing the first time at a special point of time. When people use the word "new" on a trade fair for example that can mean either a or b or both. In the b case – the association is made to time – something new is something that will appear at a certain point of time, i.e. the phenomenon is "new in time." If one talks about "the new performance on Tuesday" that relates to something that is happening there and then, but it does not necessarily mean that originality is involved.

defined as something principally new and significant, in any area that arises at a specific point of time and then evolves and makes a foothold in society.

4 The creation of a novel opera arena

The opera singer and radio producer Margareta Dellefors had been responsible for the opera production department at Swedish public radio since 1973, a job that included reportage visits to different festivals around Europe, such as Verona, Bregenz and Savonlinna. On the last day of March 1991, Dellefors retired from Swedish Radio, at the age of 65 years and she was free to do new things. Dellefors recalled: *"I wanted to find a place for an international music festival in Sweden, but maybe something different. I and my husband Göran Bladini had a summer-house in Rättvik and I knew that in Rättvik, in the beginning of last century, limestone industries were important."*

In summer 1990, she explored the countryside around Rättvik searching for old quarries, using a local map, but did not find any as they were well hidden, partly for safety reasons. One of the persons Dellefors asked was Rättvik's cultural director, Åsa Nyman, around New Year's Day 1991. On 18 May, Dellefors got information about a site called Draggängarna from Nyman. They went by car to the quarry the very same day.

The limestone business Kullsbergs Kalkförädlings AB had just ceased use of its limestone quarry Draggängarna, leaving a gigantic hole in the bedrock after centuries of digging. Deciding what to do with this monument from the heyday of mining prompted suggestions such as using it as a municipal rubbish dump. Margareta Dellefors had a very different idea, namely to create a summer arena for opera in the enormous quarry. She reconstructs the moment of inspiration as she arrived at the quarry: *"As soon as I saw Draggängarna I knew: this is the place for an international opera festival. I christened it Dalhalla thinking of Wagner."*

The cliffs had different pastel colours because of different kinds of rock minerals in vertical lines – black, pink, bluish, white and brown. At

the bottom, there was an emerald-coloured lake, never ceasing, because it was under groundwater level. The quarry was huge. Here were all the natural conditions needed for the arena she had dreamed of. This was exactly the place for her; she sang and recited poetry, noticing the marvellous acoustics, reverberation and silence.

Dellefors photographed the site and then magnified the best one. Then she bought transparent sheets in a bookshop as she wanted to visualize her vision by drawing on the photos she had taken. She drew a stage in the middle of the lake, and a grand stand opposite it (see fig. 2).



Figure 2: Dellefors with her drawing above the magnified photo. Photo: Per Frankelius.

The period between her first visit and her written project plan 9 July 1992 involved intense marketing and hundreds of contacts, speeches, and meetings. Information about the project began to spread with the first article on the Dalhalla project in the *Land* magazine and the next written by Carl-Gunnar Åhlen in the Swedish newspaper *Svenska Dagbladet* (one of Sweden's largest morning newspapers) in July 1992.

On 6 August Dellefors managed to convince some decision-makers in the municipality and the County Council, to visit the quarry and see it with their own eyes. It happened to be a chilly day and the only thing they saw was an industrial ruin. But Dellefors said "*Stay here, you will experience something.*" Then she went 100 yards away, on the other side of the quarry, and then she started to sing an opera aria. The men

were noticeably impressed by the acoustics of the quarry. *"Imagine if I had not been able to sing,"* said Dellefors afterwards. Maybe they could help with some money, Dellefors thought, but still no decisions were made.

A lot of money was needed for the project, and the main problem was finding and persuading sponsors. In retrospect, about 70 million Swedish crowns (about USD 7.8 million) would be needed to fulfil the dream. She needed to convince a lot of people: *"Everyone in the little country town of Rättvik considered me more or less crazy, but as I presented letters and documents from well-known Swedish musical authorities I did manage to overcome initial scepticism."*

The perfect marketing concept for that, she thought, was to arrange a trial concert that would prove the musical potential. Such an event costs a lot of money. Dellefors recalls: *"After about two years I managed to raise the necessary money to hold a trial concert, which would prove among other things the extraordinarily good acoustics Dalhalla had."* Thus, the fund-raising process was crucial. The problem was that many observers did not believe that Dellefors was serious. She reflects:

"Suspicious always arise when something new is initiated. 'We cannot do this, it has never been done before', 'We must do this, because, that is what we always have done', 'Opera – that is something where people only shout and you can't hear a word of what they are singing', 'And who does she think she is, wanting to come here and tell us, what we shall do'".

Others thought it was a nice idea, but would never dream of investing money in such a project. Dellefors encountered resistance from sceptics everywhere including experts in engineering and economic matters. Articles in newspapers were also written about the challenges for the project. Furthermore, opera is something foreign for most people, particularly people in Dalarna, the folk music capital of Sweden.

However, she did arouse great enthusiasm among a few. In January 1993, the County Administrative Board decided to support the project with SEK 50,000. Then the Municipality also decided to support it with

the same amount. Thanks to this money Dellefors was able to hire experts to examine the limestone quarry from a safety point of view. The fascinating hole was found to be around 400 meters long, 200 meters broad, and as deep as 60 meters. Its walls were nearly vertical and the acoustics were on a par with Greek amphitheatres. The acoustic quality of the limestone quarry was something, as mentioned, that Dellefors noticed directly. She also understood that this was a very important aspect of the place as well as the fact it was located far from the noise of cities, roads and factories.

May 1993 was the right time to present her idea for the local people of Rättvik. She invited them, through the local papers in Rättvik and Leksand, to the library in Rättvik on Tuesday 25th of May. The interest was enormous and it was soon crowded with people of all kinds; everyone was positive, even those who hardly knew anything about opera and classical music.

The next step was to stage the trial concert made possible through funds from the Ministry of Culture in Stockholm and the Rättvik community. Together with the head of the community Dellefors wrote invitations to the concert. Only 150 people were allowed, as one still did not know about the security of the limestone quarry.

A project group was appointed in the spring of 1993, with Dellefors as project leader. On 18 June, the trial concert was performed with a specially invited audience. Everyone was taken down to the quarry by car, including people from the Ministry of Culture, directors from the concert and opera community, and extremely importantly, national and local television teams alongside journalists from important Swedish newspapers. Dellefors explains: *"I chose people who were connected with music and opera in particular and music writers and critics and of course people connected with state organizations who supported culture with money."* In total, there were 200 people on the list.

The concert was successful. To take the edge off the criticism that the idea did not suit Rättvik's folk music culture, Dellefors spiced the program with traditional fiddlers and birch-bark horn blowers (see fig. 3 and 4). She will never forget this concert:

"The local people had contributed with big bowls full of wonderful wild summer flowers and were all there in their national costumes. Birgit Nilsson, our world-famous soprano, sat there in her mink coat on the first bench. I introduced the program by singing the first lines of Elisabeth's greeting aria from Tannhäuser, 'Dich teure Halle, grüss ich wieder'."

Dalarna's own orchestra DalaSinfoniettan, and four young singers sang opera arias. Folk music was played, and a choir of 200 singers from the on-going international choir week sang Hallelujah from *Messiah* by Handel.



Figure 3: The trial concert 18 June 1993. Photo courtesy by Leif Forslund.



Figure 4: The famous Wagner soprano Birgit Nilsson and Margareta Dellefors at the trial concert. Photo courtesy by Leif Forslund.

The concert was covered by the national and local press as well as television. The biggest newspaper in Scandinavia, *Dagens Nyheter*, wrote: *"It is simply brilliant. A limestone quarry in the middle of the forest as a giant opera arena."*

The next Monday after the trial concert (21 June 1993) Dellefors applied for the protection of her name Dalhalla. She sent the application and the money in her own name. As sender address, however, she wrote the one of Rättvik municipality. Now a strange thing happened according to Dellefors:

"Behind my back two executives in the municipality, in September, asked the Patent and Registration Office to get my application back. Then they wrote their own names on it and sent it back to the Patent Office. Thus, depriving me of my rights to the brand."

Dellefors invested lots of time in collecting information on specific targets during her fundraising. *"I sat down in the library and looked through big books for foundations that might be interested in investing money in Dalhalla."* She then contacted each prospect with a tailored proposal. After the first contact, Dellefors continued her actions. *"When I had sent a request, a proposal or an application to potential donors I always continued to update them about the progress of the project."* Her relationship marketing was both comprehensive and personal. *"I do not know how many applications I have written. It must be a couple of hundreds."*

Dellefors continues: *"After the important and successful trial concert I invited people to become members in the society 'Friends of Dalhalla'. It soon amounted to more than 3,000 members. Our world-famous Wagner soprano Birgit Nilsson, my great friend, consented to be our honorary chairman."*

During the first years Dellefors mostly worked alone on the project, but one helping hand arrived in December 1992, the architect Erik Ahnborg. He got in touch after having read an article in the Swedish newspaper *Svenska Dagbladet* 22 November about the opera vision for the limestone quarry. Ahnborg is the man behind the famous concert

hall in Stockholm, Berwaldhallen. Dellefors felt that he was the right person to help her fulfil her vision. She showed him the photo with the amateur drawing of her vision overlaid on top of it. By September 1993 he had made professional drawings of Dalhalla as an opera arena. These drawings were of greatest importance for all further processes.

In December 1993 Dalhalla got SEK 1 million from Boverket, a State organization that supports private art projects.

As the information about the Dalhalla project spread, mixed reactions followed. On 18 February 1994, a critical article in the regional press was published. The article questioned the plausibility of the vision of creating an opera arena in the middle of a folk music county like Dalarna. The many problems alternated with success. Positive news came on 21 February when the County Administrative Board of Dalarna, despite local criticism in the media, decided on a grant of a further 500,000 SEK.

In the Spring Dellefors had enough money, totalling about 4 million SEK, to start rebuilding the limestone quarry into a festival arena. With pomp and circumstance the first dynamite blast was fired 13 May – by Birgit Nilsson – and also shown on television. Now constructions could start. A provisional stage was built on the lake, with a water channel between the stage and the audience – this channel proved to be worth gold, as we will see later on. And they installed seats for 1,620 people.

In this spring, 1994, the project also had the resources to plan and conduct an opera concert that was to take place 23 July. The 1,600 concert tickets sold out in no time. Part of the reason was that Dalhalla had now got recognition from the state, as the Ministry of Culture had contributed 250,000 crowns. In their press release they described Dalhalla as the Verona of the North, an attribute that is still connected to Dalhalla. A few other concerts also took place that summer, and were seen by a total of about 3,000 people.

In the summer of 1995, the audience capacity was expanded to 2,670 seats. Parking places were arranged and a protected path was laid down into the quarry. The stage, with an aesthetic roof of sailcloth, was placed on a peninsula in the emerald-coloured water, down in the quar-

ry. About 40,000 tons of limestone were blasted and used as material for the stage. The 11-metre broad channel between stage and audience was ready. The dream was transforming more and more into reality.

The official inauguration of Dalhalla took place on 21 June 1995 with a major opera concert that was broadcast on Swedish television. Unfortunately, that very day the area suffered an awful storm and the concert had to be stopped halfway through. Despite (or partly because of) the disaster Dalhalla soon became known throughout Sweden and its fame spread abroad like wildfire. The television broadcast was important. Dellefors confirms: *"The Swedish television did manage a whole planned program, even if the total concert did not take place."* Since Dalhalla already had become internationally known, there were journalists there to cover the event. For instance, Stephen Pettitt from the British newspaper *The Independent* wrote an article about the inaugural concert and was sure about a bright future for the project.

1995 was the break-through year. Besides the concert in June, Dalhalla also co-operated with the festival Music at Siljan, Rättvik. Folk dance and jazz concerts were organized.

The staging in 1996 of a short version of Wagner's opera *Ring of the Nibelungs* took two years to plan. Dellefors tells:

"I read an article in the magazine Musikdramatik written by the editor Torbjörn Eriksson. It described how, in 1994, Iceland celebrated their 50 years of freedom as a republic. Part of the festivities was a performance of Richard Wagner's Ring of the Nibelungs in a short version of 4 hours."

And Dellefors reflected: *"This seemed to be interesting and also viable for us. Already in January 1995 I contacted Iceland, to get more information about their version."* The work for this project was enormous. A lot of money was needed. Dellefors comments:

"I started the marketing work for this coming event already in autumn 1995. With the help of Bengt Göransson (former minister of culture) we got a distinguished opportunity. He offered the big ABF conference centre for us to organize a seminar called 'Richard Wagner – genius

and monster in the same person'. The seminar took place 25 November. We started at 9 in the morning and finished at 5 in the afternoon. We had advertised in Stockholm newspapers and the hall was crowded. The Court singer Birgit Nilsson made the introduction, and was interviewed by Musikradion's Tom Sandberg. On request, she delivered her famous Ho-jo to-ho from the Valkyrie, and the high C hit the roof like a rivet."

The conference ended with Dellefors presenting the good news that the foundation Crafoordska stiftelsen, was to contribute one million crowns for the Wagner project the following year. She got this message the day before the seminar.

The Wagner opera was performed 9 August 1996, and it was a triumph. Imagine three enormous persons on stage, the Rhine maidens, about three meters high (see fig. 5 and 6). One would think that they walked on stilts, but that was not the case. Under the singers were three young music students from the Falun Conservatory, hidden-well by the costumes. They moved according to the director's instructions with help from numbers written on the stage.

The lightning was a masterpiece in itself. Carl-Gunnar Åhlen wrote in Svenska Dagbladet: "*When the lightning manager Thomas Mirstam transforms the rock wall behind the lake, the orchestra podium and the acoustical sails, into by far the world's largest circular horizon, it' is so awesome that you gasp.*"

The Viennese opera magazine, *Der Neue Merker*, named Dalhalla the most powerful opera arena in Europe, partly because of visual effects towards the end that had never been made in such a beautiful way. Also, CNN attended this event, and produced a five-minutes reportage, shown all over the world.

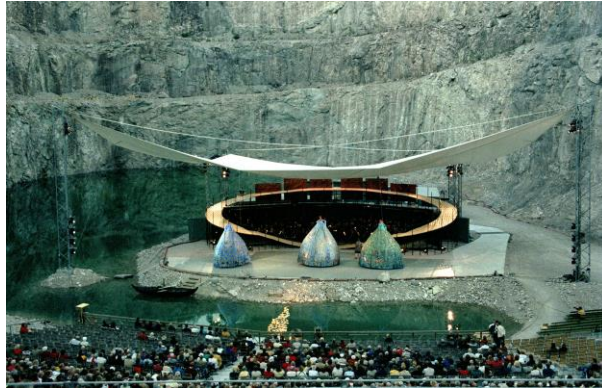


Figure 5: The Rhine maidens in the Wagner opera. Photo courtesy by Leif Forslund.



Figure 6: Close view on the Rhine maidens in the Wagner opera. Photo courtesy by Leif Forslund.

Brian Kellow, the chief editor of the premier opera magazine in the United States, *Opera News*, wrote an article and pointed out the fact that one really could perform opera entirely acoustic. Many international magazines made articles about Dalhalla. See table 1. The opera experts considered the Dalhalla phenomenon original – as a new innovative thing in the opera world.

Magazine/TV	Country
Opernwelt	Germany
Orpheus	Germany
Opera Now	U.K.
Metropolitan Opera News	U.S. (New York)
<i>Der Neue Merker</i> (The Vienna Opera's magazine)	Austria
German Television	Germany
South Africa TV	South Africa
CNN	U.S.

Table 1: International media highlighting Dalhalla in 1996.

The great event of 1997 was a longer version, a full-evening show, of the Nibelungen Ring on 14 August. During this year they played four operas and six concerts of classical music. This year was also a Fireworks concert arranged and that became a tradition at Dalhalla.

To understand the critical events in 1997 we have to go back one year. In May 1996, the company Dalhalla Produktion AB had been established, wholly owned by the "Friends of Dalhalla". This company was to have the economic responsibility for the productions. The company appointed a CEO, Nils Aittamaa. Dellefors was the artistic manager, and concentrated on the concert program. Unfortunately, cooperative problems emerged and deepened during 1997. At the end of 1997, Dellefors told the company board that they had to choose between her and Aittamaa. She won this ultimatum and then suggested that Håkan Ivarson should become the new CEO. At that time, he was the manager of the orchestra DalaSinfoniettan. Ivarson was employed from March 1998.

Every year had Dalhalla around 20–30 events. Fig. 7 shows how the arena looked like from the air. The big thing in 1999 was a concert that included the mega opera star José Cura. The artist himself had approached Dellefors (through his agent). He had probably heard of Dalhalla via the CNN reportage. This event was complicated as Cura wanted to bring the Philharmonic Orchestra of London with him. He not only sang but also conducted. Dellefors remembered: *"160 different letters and faxes, and as many from his agent, were needed to fulfil this guest appearance."*



Figure 7: Dalhalla Opera arena in the middle of the forest. Photo courtesy by Martin Litens.

Many practical problems were to be managed – some of them unexpected. In the summer of 1999, for example, a tornado destroyed the sail-roof. Dellefors comments: *"It happened on Friday the 13th of August the very same evening that we played our own version of Richard Wagner's Ring. Part of the scenography and the light depended on this roof. But we could fulfil the opera."*

The fundraising process was always in focus. And she was sometimes very successful. Dellefors fills in: *"11.4 million Swedish crowns were given by a rich couple in the neighbourhood."* She managed to get more and more money from sponsors. The Barbro Osher Pro Suecia Foundation, based in San Francisco, gave Dalhalla SEK 2 million for opera productions (in the years 2000 and 2002). Later, the Barney Osher foundation also donated money and a first-class theatre text machine. During 1999, Dellefors also managed to get a main sponsor, the oil company OK/Q8. Another important part of the financing process was Dellefors's ability to round up pro-bono help from professionals such as the first-class architect Erik Ahnborg. But Dellefors concluded: *"The first 100,000 were actually the most difficult to get."* Probably her biggest support during the whole process was her patient husband Göran Bladini.

On 7 June 2000, the Swedish King and Queen were part of the audience to witness a concert with the Royal Philharmonic Orchestra. At this time, Dalhalla had got 4,000 seats as well as heating for the orchestra pit

and an artist building behind the stage (from geothermal power 180 meters down). A stable roof was supported by pylons secured 26 meters down in the ground, a roof that further improved the acoustics and was perfect for the various types of light scenography. The stage was 42 meters wide and 18 meters deep. The stage also had a professional lighting system. In the middle of the stage area was a small section whose height level could be adjusted by hydraulics.

Besides technical equipment the natural aspects of Dalhalla were at the core of what made Dalhalla unique. Dellefors told how they took advantage of this: "*When we did Wagner the water ditch was the Rhine. In Nebuchadnezzar, it was the Euphrates River. In Aida, it was the Nile. In the Flying Dutchman, it was the Norwegian coast. No arena has anything similar.*" In the case of Lucia Di Lammermoor the Riga Opera directed this opera. The water provided the director unexpected opportunities to interpret the opera by means a new creative design. The water reinforced the image of Lucia's vulnerability.

In spring 2001, the Swedish retail clothing company Hennes & Mauritz arranged a fashion show at the site. Journalists and top models, including Grace Jones, were flown in from all over the world. The company's annual report mentioned Dalhalla in three places and pictures from the event were over two full pages. Since 1998 Dalhalla had continually been used for events other than what the arena was originally intended for. Despite Dellefors protests, pop concerts began to dominate.

Behind the scenes there were problems. In 2001, Dalhalla had been on the brink of bankruptcy, but was saved by a loan from the County Council thanks to Dellefors and the then Chairman of Dalhalla Bengt Göransson (former Minister of Culture). In the same year, Dellefors, on her own initiative, left her position as artistic director, but would, according to a new employment contract remain as artistic consultant. After the near-bankruptcy incident she was, in March 2002, re-hired unanimously by the board as artistic director, but with some restrictions. The problems were not seen by people in the outside world at this point of time.

In 2003, the Royal Opera had planned a big 10 years jubilee concert to celebrate Margareta and Dalhalla. The concert was planned to take place 17 August. But late on Tuesday evening, 3 June 2003 a letter was thrown into the mailbox of Margareta Dellefors' apartment in Stockholm. It stated that she had been removed as the artistic director of Dalhalla; in other words, she was fired. This was the culmination of a struggle that locally now had become known as the opera war. The core of the disagreement was whether Dalhalla should focus primarily on opera or turn to more popular genres. But according to Dellefors, it was more about a personal issue. She commented:

"I lived in Stockholm most of the time, something that undermined my position. Behind my back plans were made. I began to understand that I had three handicaps: My gender (I was the only woman on the board), my age, and being a Stockholmer."

The conflict soon became known also outside of Dalarna and people in the Swedish art world started to react. Many people were aware that Dalhalla had got lots of financial sponsors, because of its focus on primarily classical music and musical theatre, but now focus had shifted. A protest letter written by Sweden's three opera directors and some other music personalities was submitted in person on 12 May 2003 to the association "Friends of Dalhalla" (and its Chairman, the former deputy prime minister). This letter was also sent simultaneously to Dalhalla's Office for distribution to members of the association at the annual meeting 24 May. Dellefors fills in: *"That distribution did never occur!"* The annual meeting became chaotic.

The board of directors of Dalhalla's production company thought that Dellefors herself was behind an attempt to replace the board. This was not true. But she maintained that classical music and opera should dominate Dalhalla's programming. Many people had the same opinion. The violin player Johann German, for example said, *"Without opera, Dalhalla is lost – that is Opera giving Dalhalla its musical distinctive character."*

Despite what had happened with Margareta the concert in August 2003 took place. Dalhalla was covered extensively by television and newspapers. That year the prestigious *Festspiele Magazine* in Vienna ranked Dalhalla number three of the best outdoor arenas (after Verona and Orange). It wrote: "*It does not matter if you go to Verona or Dalhalla – it becomes a memory for life.*"

In 2004, Dalhalla (again) was near bankruptcy. The economy continued to go up and down over the years. Rescue operations, especially from the municipality, helped to save the business. The Dalhalla brand was so strong and was of great importance for the municipality.

In Dellefors' perspective tragedies and happy moments resolved each other. On 17 June 2006, a bronze bust of Dellefors that had been donated by the approximately 2,000 people who had left the association Friends of Dalhalla, was unveiled.

In 2008 Dalhalla lost one in four visitors. In the summer of 2009 the program once again contained an opera – Mozart's Magic Flute. The five performances attracted 15,000 visitors in total. The cost of the Magic Flute was, according to budget, about 20 million SEK. A new roof was built for 8 million SEK in 2009. That roof, however, proved to be an acoustic disaster, condemned by several experts. See fig. 8. In late 2009, the CEO Håkan Ivarson publically announced that he would leave after the following season. The board led by Kjell Ingebretsen (also Preses at the Musical Academy) did not hire a new CEO. In 2010 the annual administration costs approached 10 million SEK.



Figure 8: The new roof at Dalhalla. Photo: Per Frankelius.

In 2011 Dalhalla had no opera performance and only a concert version of Donizetti's *L'Elisir d'amore*, which now was entirely dependent on electronic amplification.

Because of economic problems Dalhalla Produktion AB had borrowed in total 4,125,000 SEK from inter alia. Rättvik municipality. Lots of negotiations occurred behind locked doors leading to that the municipality got control in Dalhalla Produktion AB. Then, 30 November 2011 the business was sold to a private company, called Rättvik Event, owned by the millionaire Conny Gesar (rich through the gaming industry). It was made public 1 December through the press. The board resigned.

The program during the summer 2012 was most about popular music including heavy metal. And for example, the event 16 June with James Morrison had "*embarrassingly small audience*" according to Liselott Hillmann, one of the visitors. But also, positive things happened: On 11 August, a Dalhalla aid gala was arranged with opera promotion as the main message. The plan, according to Dellefors, was to set up a new full-scale opera production in 2013. The plan did not become reality.

Rättvik Event arranged the program in 2012–13. In the end of 2013, however, Anna Larsson and Göran Eliasson at the company Fal Parsi AB asked if they could hire Dalhalla in 2014 for an opera event. That was agreed. The first opera became *The Rhine Gold* (played two evenings). In 2015, they set up the *Turandot* opera with Nina Stemme as Turandot, and in 2016 it was *Carmen*. Rättvik Event demanded 600,000 SEK for two weeks rent to opera activities.

Musicians and singers loved Dalhalla. Gudrun Domar, choir leader, put it this way: "*There is nothing you can compare Dalhalla with. Concert and nature play together. Singing in Dalhalla is something very special.*"

Over the years Dellefors received all kinds of prizes. In 2001, she received the Illis Quorum medal from the Swedish government for meritorious services. She received the King's Medal of the eighth magnitude the same year. She was especially happy about the medal she received from The Musical Academy of Stockholm in 2001 for "*promoting classical music.*" In 2002 Dellefors was invited to make a speech at the European Parliament. In 2010 Dalhalla was invited to participate in an inter-

national exhibition in Verona about what can be done with quarries. This was led by the renowned architect and professor Vincenzo Pavan. It is worth noting that Pavan, despite having a world-famous outdoor arena at home (Verona), considered Dalhalla something truly original.

On 20 March 2016, Margareta Dellefors had her 90th birthday. On 14 August, an honorary concert was arranged for her, which became an impressive cavalcade of classical music and opera highlights. A number of famous opera singers and musicians participated to celebrate Dalhalla and Margareta (see fig. 9).



Figure 9: Margareta Dellefors at the fest concert 2016. Photo: Per Frankelius.

Dalhalla meant a lot for the region and the people in it.¹⁰ An investigation in 2010 concluded that Dalhalla had contributed with more than one hundred million SEK since its start. Martin Litens, living in the village Västberg next to Dalhalla, made this reflection in 2017:

"Dalhalla made the local people feel proud. They also helped Dalhalla over the years by means of idealistic work, such as parking assistance.

¹⁰ Billy Höglund, Hotel Director in Rättvik, said in 2001: "We dared to expand just because of Dalhalla. We have 100% occupancy thanks to Dalhalla". Olle Nilsson, Municipal Chief, said: "Dalhalla means a lot for Rättvik - not only as a cultural event, but also as an engine for the municipality's development." Sören Kratz, Municipal Council, concluded: "Dalhalla has put Rättvik on the international map."

Dalhalla brought not only proudness, it also brought opera and classical music, which was something new in the eyes of most locals. On a general level Dalhalla had very positive effect on the economy in the region."

There were attempts to maintain the opera profile of Dalhalla. In the 2017 season, three events were arranged: Léo Delibes' *Lakmé*, an Opera gala and Orff's *Carmina Burana*.

The season for next year, 2018, is now being planned. The highlight will be an opera concert to celebrate the memory of Birgit Nilsson, the God Mother of Dalhalla. The Dalhalla story will continue. Part of what happened during the key years are summarized in fig. 10.

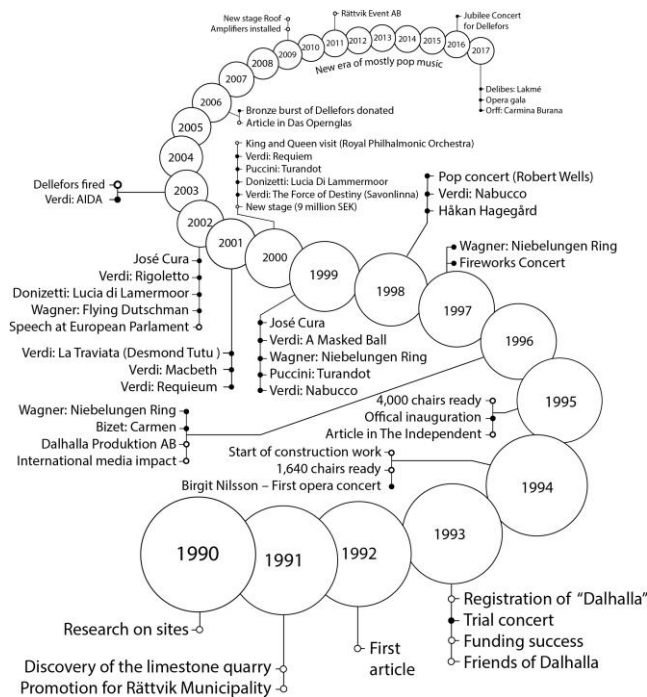


Figure 10: Overview of the Dalhalla creation process

5 Analysis

Many international opera experts considered the Dalhalla concept original in relation to what existed before. When Dalhalla in 1994 was also introduced to the people of Sweden, and thus obtained a foothold in the community, Dalhalla transformed into a form of innovation. The Dalhalla creation was situated in the folk music village Rättvik, far away from big cities, and therefore probably was perceived as revolutionary in the eyes of many people not least those in the Rättvik area.

From a historical point of view the Dalhalla case empirically connects to one of the very roots of the innovation concept. As described, one Greek word related to innovation was *kainotomia* used by Aristophanes in a comedy. Like Dalhalla this was a performing art context. Another interesting connection is that the time of Aristophanes was also a dawn of amphitheatres and it has not escaped someone's notice that Dalhalla also was a kind of amphitheatre, albeit one of a very special kind given it was not "above" but "under" the ground level.

The etymological study of the innovation concept is embodied in the model shown in fig. 11. This model positions different phenomena by means of the three dimensions of originality, impact (foothold degree) and time. Operationalization of originality is an empirical question. Gidlund & Frankelius (2003) proposed intellectual property law science for managing the operationalization. Impact (or foothold degree) can be defined in terms of "users" adopting the novelty in question, in line with the diffusion theory (Tarde 1890) or market selection, if connecting to the evolution theory (Nelson & Winter 1982). If adoption (or selection) occurs on the market the phenomenon is called commercialization.¹¹ The time dimension means that the phenomenon must be related to a specific time-point to be meaningful from an innovation point of view. An invention may, for example, be only perceived as an invention at a certain point of time, while at a later point of time it can be regarded as a common and natural concept or even a tradition.

¹¹ If adoption (or selection) is outside the market context the word valorisation can be appropriate.

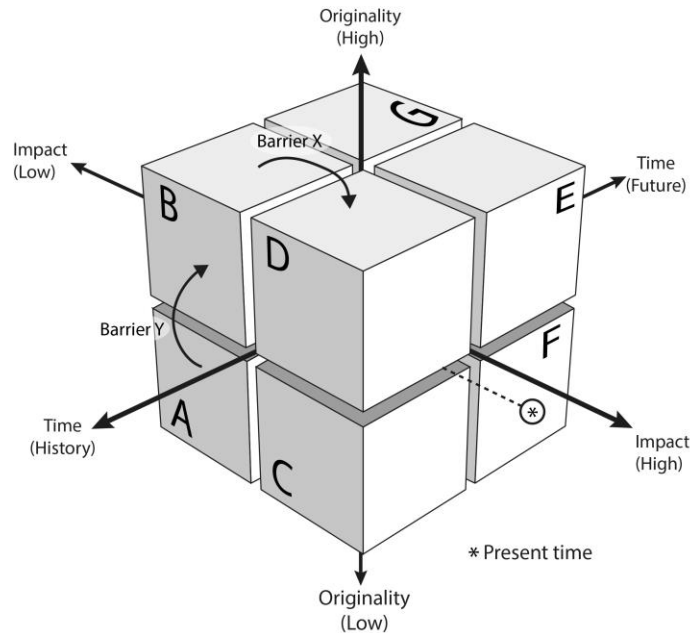


Figure 11: The innovation cube

Cell B in fig. 11 represents inventions or other kinds of principally new ideas or concepts – i.e. new products (or services) with potential to become innovations. Following the etymological study of the innovation concept the new creation (content of B) must make an impact, that is *make a foothold* (or *gain ground*), to enter cell D (to become an innovation). The transformation connects to the innovation processes models in our theoretical spectrum (Arrow 1962) and can be made through internal implementation, successful launch on the market or valorisation of some other kind. According to the innovation process models (e.g. Foxall 1984) marketing and customer demand are central aspects of innovation. Transformation in the figure also connects to the selection term (Nelson & Winter 1982).

The cell A represents insignificant phenomena and cell C represents phenomena that are traditions, incremental improvements or imitations, often central in the evolutionary theories (Nelson & Winter 1982)

as well in the diffusion theories (Tarde 1890) and probably also in the collective determinism theory (Ogburn 1922).

The barriers between cells can be of many kinds. In this model barriers are divided into Y and X types. The Y barrier represents problems to overcome if someone wants to think-out something very original, which connects to the Great-Man theory (Schon 1963). An X barrier is something that hinders a concept (original/novel or not) to make impact (or make a foothold). One example derived from the diffusion theories is lack of information among potential users (Tarde 1890). Because of the time dimension in fig. 11 an innovation (D) can, over time, be regarded as tradition or forgotten innovation (E). It means that the label innovation is perishable as seen from the majority's point of view.

What shape, then, can innovation have in the area of opera and classical music arenas? The Dalhalla case can be looked upon through many lenses. One lens is to look at Dalhalla as a mixture of art and nature, or "*neue Kombination*" (Schumpeter 1912: 173) if connecting to the innovation-in-economic-development theory. Remember that the reason for Dellefors' fascination with the place was its natural conditions. The mountain, with all its layers that shifted in different pastel colours, was part of this. At least as interesting was the water in the form of the emerald green lake. In fact, this particular lake was converted to become both lake and canal in front of the stage. This made Dalhalla so original and was part of the reason why, as written, the "*acoustics was on par with Greek amphitheatres.*" The transformation of Dalhalla from a limestone quarry to an opera scene needed both destruction (of the quarry) and creation (of the opera scene). The case therefore fits well with Schumpeter's (1942) concept creative destruction.

Another combination that made Dalhalla world famous was that of combining the arena *per se* with content in form of self-produced performances, not least operas. The content was possible due to Dellefors extremely high competence in the world of opera and classical music.

Which barriers affect innovation processes in the context of arena creations? *Funding* and huge *need of time efforts* from Dellefors were obvious barriers (compare Schumpeter 1942 and Schon 1963). She

worked more or less ideally all years. *Resistance from established actors* not least in the early phase was an obvious barrier. Dellefors many times felt that the resistance against her was due to the fact that she was not young but a retired person of age, or because she was a Stockholmer, or just because she was a woman – or a combination of all these. Another barrier was the *power play* among different persons that ended up in catastrophic effects, both economically and personally. Compare the innovation process theory (especially van de Ven 1986). The ethical aspects of this are worth further research. Still another barrier was *X factors* such as the tornado that destroyed the sail roof just before the performance of Richard Wagner's Ring.

What about stimulating factors? Dellefors' creation was boosted by her *dedication* to fulfilling the vision. Her *network and competence* became rocket fuel. Some specific actors were critical, such as the world-famous soprano Birgit Nilsson and the architect Erik Ahnborg. This connects to parts of the open innovation perspective, especially Chesbrough (2003). One stimulating factor was *continuous searching for opportunities*. Another was *brilliant marketing* completely in line with Drucker (1954).¹²

The Dalhalla case, as discussed here, connects partly well to some of the perspectives in the theoretical spectrum used in this study. The reframing of the quarry into an opera scene was an illustrative example of "creative destruction", and showed not least that "destruction" can go hand in hand with "novelty creation". Some issues in the case, however, were not covered by the theories. Examples are the nature involved, the art as "innovation object", the X factors such as the tornado and the gender and age aspects. On the other hand, quite many concepts in the theories, like the innovation funnel in the innovation process perspective (Wheelwright & Clark 1992) shone with their absence in that case.

¹² Part of this can be called relay race marketing. That means one activity (like the trial concert) is marketed and then, after being fulfilled, in turn becomes a new marketing tool for further steps.

Among the seven perspectives it is not easy to connect the case to the third perspective, collective determinism (Ogburn 1922) or to the sixth perspective, evolutionary theory (Nelson & Winter 1982). Regarding the diffusion perspective (e.g. Rogers 1962) Dalhalla was special in that the innovative concept was related to a specific place. There was no diffusion of Dalhalla as a whole, but if we consider each ticket to Dalhalla as a "use" of the innovative concept, then all sold tickets over the years can be looked upon as a special case of "diffusion". In table 2 is summarized some cores of the theories discussed in relation to the Dalhalla case.

		Stimulating factors	Originality level in focus	Innovation objects	Central actors	Abstraction level	Time frame
The Dalhalla case		Dedication Network Art competence Marketing competence	High	Art	Creator Sponsors Media Audience	Individual Micro	Middle range
Theoretical spectrum	1. Diffusion theory	Information Opinion leaders	Low (creation is exogenous to the models)	All kinds	Users	Meso (industry sectors)	Long processes
	2. The Great-Man theory	Brainwork	High	Mostly technology	Inventors	Micro/Psychological	Instantaneous
	3. Collective determinism	Society	Not specified	Mostly technology	"Nobody and everybody"	Macro social	Long processes
	4. Innovation in economic development	Creative destruction New combination Convincing financiers	High	Technology Business	Innovating entrepreneurs Funding agents	Macro social	Long processes
	5. Innovation processes models	Demand pull Technology push	Not specified	Mostly technology	Managers	Micro social (business firms)	Quite short
	6. Evolutionary theories	Competition	Low/Incremental	Mostly technology	Firms, markets and institutions	Micro/Meso	Long processes
	7. Open innovation	Users R&D	Not specified, but often incremental	Mostly technology	Companies, users and partners	Micro/Meso	Middle range

Table 2: Aspects of the perspectives in the theoretical spectrum in relation to the Dalhalla case.

6 Conclusion

The starting point for this article was a spectrum of innovation perspectives. This spectrum was applied as reference points for the analysis of a specific case: Dalhalla. Out of an abandoned quarry Margareta Dellefors created something novel in the opera world. Many people enjoyed the magical combination of nature and art over the years, and Dalhalla gained world fame. By means of a model describing three dimensions of innovation an attempt was made to understand how originality, impact and timing form innovation. The case presented here illustrated the huge amounts of energy needed to realize innovation by "creative destruction" alongside "novelty creation". While Schumpeter's "destruction" was to a large extent a "black box", it was an "open box" in the Dalhalla case study. All in all, the Dalhalla case has deepened the understanding of barriers and stimulating factors for innovation. Besides the innovation model this study hopefully contributes to the body of innovation theory by highlighting some aspects not very well covered in the literature. Among them are 1) the art as innovation object, 2) nature as a combination asset, and 3) the X factors as well as the gender-age aspects in relation to barriers of innovation.

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