



NATIONAL RESEARCH UNIVERSITY
HIGHER SCHOOL OF ECONOMICS

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BASIC RESEARCH PROGRAM

WORKING PAPERS

SERIES: SCIENCE, TECHNOLOGY AND INNOVATION

WP BRP 30/STI/2014

This Working Paper is an output of a research project implemented at the National Research University Higher School of Economics (HSE). Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE.

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This paper investigates the innovation activity in an amateur community. It implements the case study method to analyze the intensive innovation creation process that was going on in the whitewater paddling community during the last two decades of the twentieth century. We apply the notion innovative agency to get a deeper understating of the process of innovation creation, and to identify all actors of innovation. Further we trace the process of innovative agency delegation between actors. We find out that two radical innovations and many incremental innovations emerged in this community. We conclude that their emergence was shaped by creative and competitive environment of the whitewater paddling community.

JEL classification: O31, D12, L67

Keywords: user innovation, amateur community, community innovation, innovative agency, whitewater paddling

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Introduction

For a long time only the producers of goods and services have been considered to be able to innovate and introduce innovations. The users (both individuals and user firms) remained silent in the process of new product development. Innovation studies researchers have shown the importance of user involvement in innovation process (i.e. von Hippel, 1995, Kotsemir et al., 2013) . In recent decades they have considered numerous cases of successful firms' collaborations with their consumers to develop new and modify existing products. Innovation researchers also show that users often create and commercialize new products and services.

There are many examples of innovations that were designed by consumers in different fields of user activity, such as science (von Hippel, 1976) and software (Von Krogh, 2003). Furthermore, public opinion surveys show that it is possible to identify consumer innovators among population (i.e Zaytseva et al., 2013). Von Hippel et al. (2011) conducted a public opinion survey in several countries (Japan, UK, USA) where they asked whether people had created new products or have modified existing ones in their everyday life. The scholars concluded that a sufficient share of respondents (the study showed that among those three countries the biggest share of consumer-innovators live in the UK - 6.1%) indeed innovated both by creating new things and by improving and modifying the goods they were using. According to the study, besides craft and chop tools, sport equipment is the most popular area for consumers' innovation (Ogawa & Pongtanalert, 2011).

A popular area of research is the innovations initiated not by individual consumers, but by members of different amateur communities. Such communities usually unite people who have very specific needs that often are not satisfied with the goods and services offered by producers. Usually amateur community members are more creative and more interested in innovation compared to other people. Especially high innovation activity is believed to happen in sport-related communities (i.e. Luthje, 2004). Researchers show that usually community members do not commercialize their innovations and freely reveal them to other community members (Franke & Shah, 2003). Therefore in this study we apply a broader understanding of innovations proposed by Gault (2012) that adds to Oslo Manual definition (OECD/Eurostat, 2005:47) innovations that were not commercialized but available for use.

Further this study examines the case of innovation activity in a sport community of whitewater paddling in Russia. This paper consists of several parts. First we investigate the literature dedicated to different aspects of user innovation. Then we describe the method and the way we collected the empirical data. After that we give a short overview and history of white water paddling in Russia and USSR. Later we describe the main results (motivation for innovation, the type of innovations that emerged in community, the role of community and its

members in innovation creation, and the process of innovation communication to community members, the industry and the state). Next we discuss our results and draw main conclusions.

Literature review

The ability and the freedom of the actor to create innovations can be called innovative agency. We derive the concept of agency from Bourdieu's theoretical framework related to the relationship between agency and structure where he develops the well-known notions "field", "habitus" and "capital". Bourdieu defines the field as a "space of objective relations between positions defined by their rank in the distribution of competing powers or species of capital" (Bourdieu & Wacquant, 1992: 113). The fundamental divisions of positions within a particular field are defined by interaction between habitus of the agents and their positions in other fields. Habitus embodies "the schemes of perception and appreciation ... through which dispositions are adjusted to positions" (Bourdieu, 1983: 344). It enables the agent to achieve various tasks. According to Warde (2004:12), "The field operates like a game wherein agents adopt strategies in competition with others to gain the stakes" The distribution of different types of capital defines individual positions within the field (Bourdieu, 1984).

Bourdieu (1986) distinguishes four types of capital: (1) economic (financial resources), (2) social (resources of membership in different social networks), (3) cultural (accumulated cultural knowledge acquired in the socialization process and cultural objects, such as works of art and etc.), and (4) symbolic (the effects of any form of capital, for example prestige, recognition and etc.). Each type of capital can be converted to another one as well as it can be transferred from one field to another. Actors' behaviour in various social fields depends on individual structure of capital and its convertibility. For example, economic capital can be transformed into status, education and etc. Social capital can be activated to gain particular income. To achieve particular goal within a field individual must actively transform capital, because the value of particular capital, its liquidity and convertibility varies in different fields. This strategy got a name "transformative agency" (Behague et al. 2008).

The system of definitions described above allows us to explain the concept of innovative agency. This notion is widely used by Banks & Humphreys (2008) to identify users' role in creating and generating media content. Furthermore van Oost et al. (2009) apply this notion to the ability of user to generate innovation (the innovative agency of users) and the key role of community in creating and supporting innovation (the innovative agency of communities). Mitleton-Kelly (2006) describes innovative agency as the ability of humans to implement their new ideas in practice. The scholar opposes creativity and innovation agencies, where the first is only the ability to think of new ideas. As shown by Oost et al. (2009) innovative agency might

belong not to one single actor, but it can be distributed among several actors. Moreover, agency might be delegated by one actor to another actor. Bruno Latour (2005) shows that agency may belong equally both to human and non-human actors that together form an actor-network.

Innovations themselves can be divided into two categories: radical innovations and incremental ones. Lettl et al. (2006) describe radically innovative product as the one whose users may have to considerably change their behaviour and attitudes, adopt new practices. Moreover, a new market may appear for this product. The author refers to radical innovations in sport equipment created by users: mountain bike, rodeo kayak, etc. (Franke and Shah, 2003; Hienerth, 2004; Franke et al., 2005; Luethje et al., 2005). Besides radical innovations, users of sport equipment are also believed to create incremental innovations, and modify existing products (Hienerth, 2006).

Literature shows that the process of user innovation differs from the process of producer innovation. Users usually innovate for their own needs because they cannot find necessary goods or services on the market, and producers innovate to sell new products to people (Hienerth et al., 2014). Often innovations are initiated by *lead users* – people who experience specific needs months or years before the majority of consumers do (Herstatt & Von Hippel, 1992). Lead users are believed to gain from their innovative solution or good. Unlike manufacturers, user innovators usually do not benefit financially, and do not want to protect their innovations; moreover they frequently share innovation related information to other lead users (Harhoff et al., 2003)

Scholars often link the innovative agency to the environment where the agent exists. For example, according to Leung & Wu (1995) radical innovations are created in environments with intense knowledge flow, such as universities, research centers and high-tech regions. However amateur communities are shown to also to have such a creative environment and stimulate innovative agency of their members (i.e. Shah, 2000, Hyysalo, 2009, Luthje, 2004, Luthje et al., 2005). Several aspects of innovation communities have been researched.

Ellen van Oost and her colleagues (van Oost et al., 2009) investigate the process of co-shaping that happens between users, community and technological innovation. They conceptualize the notion community innovation. According to the researchers, community innovation is not only a technological but also a social process. Based on a case study they conclude that there is a process of “co-evolution between technical infrastructure and the social community” (Oost et al., 2009: 200). Another conclusion drawn from this study – “social and ideological characteristics of the innovation community and the type of knowledge and expertise available in the network have shaped the technological, material aspect” (Oost et al., 2009: 201). So we can see that technological innovation is shaped by many social actors.

Often user innovators choose to commercialize their innovations, and the commercialization process of such innovations is a popular research issue. Thus Shah & Tripsas (2004) study firms that were started by user innovators. Hienerth (2006) investigates 16 cases of commercialization of innovations that were created in kayaking community. The researcher finds out that user innovators considerably contributed to the start and further development of a new market. Meanwhile traditional producer companies neglected the demand for the new equipment.

Inspired with previous studies of radical innovations created by members of sport communities the authors intend to investigate innovation activity in whitewater paddling community based in Moscow, Russia. This community was formed in the mid seventies and was unique because of high and very intense innovation activity (both incremental and radical) that was going on there. At the time of community prime all paddling and outdoor equipment was created and was constantly being improved by community members.

We are mainly interested in the way how innovative agencies are distributed among actors involved in innovation creation process. To answer this research question we investigate the actor–network formed around innovation process in the community and the actors involved in the network and their agencies.

Method

As many other user innovation scholars we employ the case-study method (Yin, 2014) for this research. We choose the case of whitewater paddling community during its prime time (end of seventies-beginning of nineties) because of intense innovation activity performed by its members who developed and introduced two radically new boats (catamaran for complex white water rivers and baidarka with both hard fame and inflatable parts). Whitewater paddling community was one of extreme sport communities where innovations were constantly initiated. The list of such innovative communities also includes advanced mountain climbing community, caving community and other extreme sport communities that flourished at that time.

Empirically the research is based on three sources. First, we conducted three explorative in-depth semi-structured interviews with two key participants of community and one ordinary member. The interview guide covered numerous issues, including the types of innovations that were created, the ideas for innovation, the demand in innovative equipment, the role of community in this process. Further we asked about cooperation with the industry, and the attempts to produce invented equipment. The interviews were conducted in autumn 2014, lasted on average one hour and a half and were recorded and later transcribed. We used Atlas Ti software for the data analysis. Also we used the interview with catamaran inventor (Papush, 2001) published in a sport journal.

Second, we used two books (Tourist Club Tushinkij, 2005 and Tourist Club Tushinkij 2012), given to us by one interviewee that were written and issued by community members. The books include memories of twenty paddlers who describe the history of community and whitewater paddling. They also discuss construction of equipment, and the materials used for construction. Furthermore the books include the minutes from community meetings and technical information related to whitewater paddling competitions and whitewater paddling schools.

And third, we analyzed several websites of equipment producers and tourist clubs. First we investigated the websites of users firms set up by community members (i.e. Volnij veter , 2014; Bask, 2014; Skitulets, 2014).

Whitewater paddling and sport tourism

Whitewater paddling is a part of a broader area of outdoor activity – sport tourism that includes different outdoor activities such as hiking, mountain hiking, caving, etc. and always involves the use of camping equipment. Sport tourism has always been popular in Russia. It began in the end of 19th century, when several sport tourism communities were set up all around the territory of Russia. In 1929 a Society for Proletarian Tourism and Excursions was organized and by 1935 it had 790 thousand members (Ganapolskij et al., 1987). Since that sport tourism gradually developed, and not only involved adults but also youths. It reached its popularity peak in the beginning of 1980s. In mid 80s more than 8 billion people were involved in self-organized sport tourism (Ganapolskij et al., 1987)

Activities within sport tourism have 6 categories of complexity: category 1 means that the activity is relatively easy, while category 6 is extreme. If the hike or trek is very easy it has no complexity category. People who plan a sport tourism activity can choose to register their route by a special commission called route qualification commission. Such commissions are to ensure that proposed routes meet the criteria of proposed complexity category and provide official documents for participants that ensure their experience. Furthermore the commission ensures the safety of those who registered their trip there.

As a separate activity, whitewater paddling developed at the interface of whitewater slalom and water tourism³ in the beginning of the seventies (Tourist Club Tushinkij, 2012:194). This activity uses the elements and techniques of whitewater slalom for paddling on turbulent rivers. For this purpose community members used 2-person demountable kayak (also called baidarka, further in this paper we will use this name to denominate 2-person kayak) or

³ By water tourism we here mean river trips with the use of small boats (canoe, kayak, raft. etc) and camping equipment

catamaran. Whitewater paddling community was formed in the end of seventies and united several tourist clubs based in Moscow districts, at universities and at some of Moscow plants. This community organized schools to teach innovative whitewater paddling techniques for different kinds of audiences including newcomers and experienced paddlers and often gathered in summer for competitions.

White water paddlers in Russia unlike kayakers in Europe preferred to paddle on remote white water rivers. The access to such rivers was usually limited, and people often had to walk for several days through the mountains to get to the river. This stimulated the community to construct new boats and make other equipment with minimum weight. Some of the radical innovations initiated by this community emerged because of this need.

Research results

The research shows that the innovative activity in whitewater paddling community was really high both at the early stage of community existence and at the prime of community (mid seventies and until the end of eighties). To illustrate this intense innovation activity let us quote one of community member: *“In our tourist club everyone realized that manufactured equipment was worthless and we made everything ourselves. We did not use any manufactured items except for zips on our self-made jackets”* (Interview 2). It was possible to identify several incremental and many radical innovations that appeared in whitewater paddling community. There are two kinds of innovations developed there: equipment for whitewater paddling (the boats, paddles, dry bags, life jackets, etc.) and camping equipment (tents, sleeping bags, clothes, etc.).

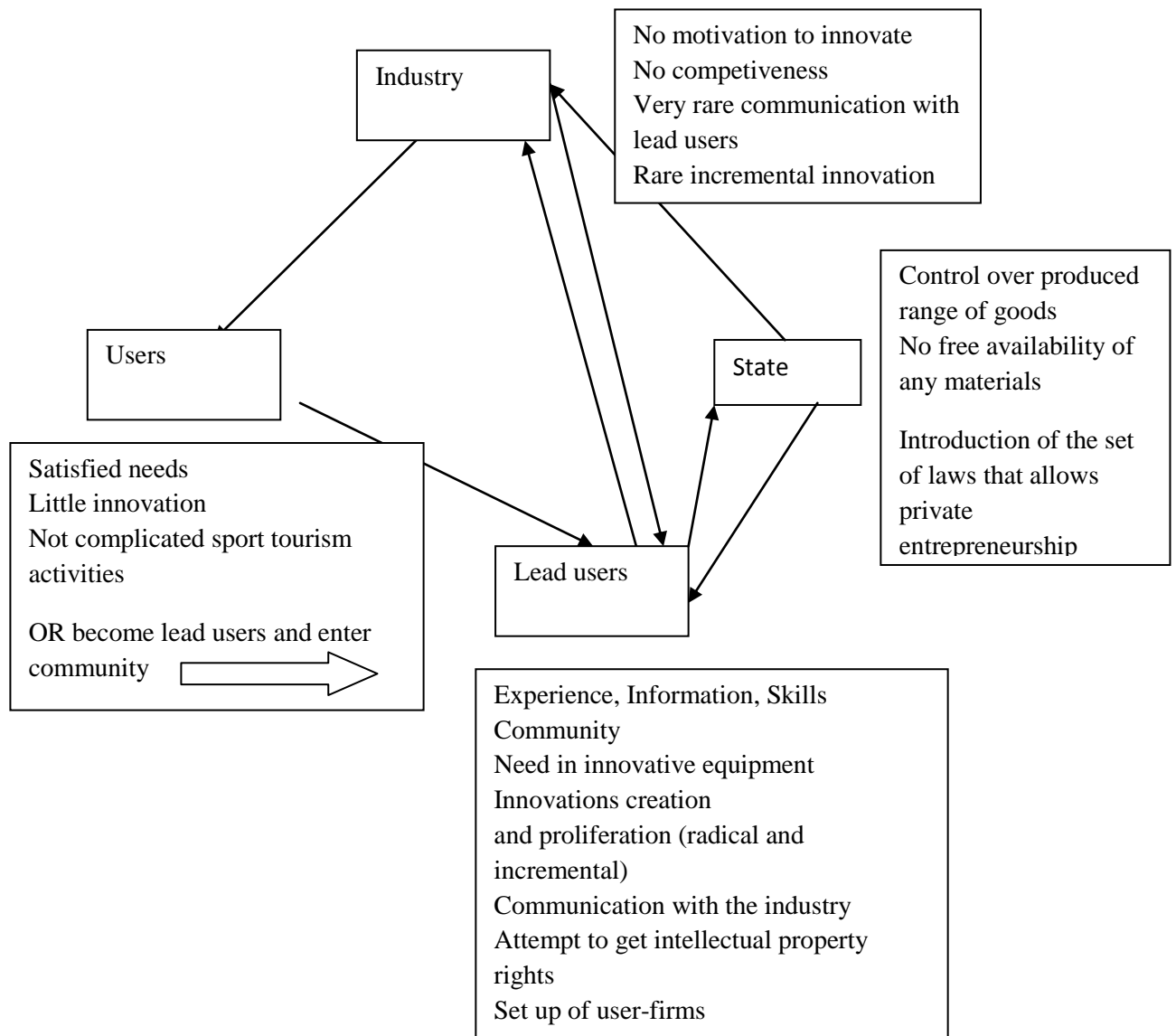
By innovations in this context we mean creation by community members of new equipment types that did not exist before (such as dry bags, catamaran and other, tents with radically new shape) and modification of existing items (i.e. sleeping bags, tents, etc.) sewn from different textiles, compared to manufactured ones. Furthermore we consider innovative practices of community members – for instance, new paddling techniques, new approaches to paddling teaching, new approach to nutrition during whitewater trips and new practice of equipment weight reduction. One of the community members gives an example of innovation: *“Instead of the rope we used few fishing lines convolved together - it was lighter and did not get wet”* (Tourist Club Tushinkij, 2012:174). Information about such changes usually circulated among community members and was available for every member.

With the beginning of Perestroika innovation process in this community slowed down. Around nineties several users from this community set up their companies, and innovation creation moved there. Since then equipment production gradually developed in Russia. Foreign

manufacturers started to export their equipment to Russia Users finally became able to buy necessary equipment and did not need to invent it and make it themselves.

At the times of whitewater paddling creation the innovative agency of equipment industry in this area was limited. During the interviews it became clear that there was no motivation for industries to produce innovative equipment. Most consumers were satisfied with the goods that were produced. Moreover, in the frames of command economy there was no competition between equipment producers. Generally the innovation process of white water equipment in the USSR in the end seventies-beginning of nineties included several actors: ordinary users, lead community users, industry and the state (figure 1).

Figure 1 Innovative agencies of actors: whitewater paddling (late USSR)



As it can be seen, not all actors in this network interacted with each other. Industry produced equipment for ordinary users, those who were involved in simple sport tourism. Such ordinary users implemented infrequent innovations. Sometimes they wanted to achieve more complexity of their activities (it is a team work, not possible to perform individually) and moved to lead user communities. Lead users in their turn did not use manufactured equipment and had to create innovative equipment themselves. Community of lead users stimulated this innovative activity by providing assistance and by organizing sport competitions. Some paddlers, especially those who created radical innovations attempted to offer their innovations (ideas, design and drawings) to the industry, however this was often rejected. Nevertheless, in one case users who introduced radical innovation (a new boat construction) managed to get their authorship acknowledged by the state. After the state allowed private entrepreneurship several lead users set up user firms.

Innovative agency of white water paddlers

Unlike people who participated in sport tourism at a lower complexity level and used industrially produced equipment, the members of this community preferred to create and make equipment themselves. They were not satisfied with the quality and functionality of manufactured items. For example one interviewee describing reasons why he had to make equipment himself said: *“The main reason why people started making equipment themselves - is that USSR industry completely did not satisfy their demand for qualitative equipment”* (Interview 2).

We can call the members of this community lead users because they first experienced need in equipment that was not produced at that time. Interestingly, before becoming community members, many of them practiced simple hiking and simple whitewater paddling (with complexity level 1 or 2) with other communities and usually used manufactured equipment. However after becoming part of whitewater paddling community, they started to make equipment themselves. In other words they recognized community innovative agency and became innovators themselves. Because there were no established solutions for many problems (for example there was no fixed tent construction, everybody could construct the tents they believed to satisfy their needs in full).

Community members had two main reasons to initiate innovations: (1) the industry either did not produce necessary equipment, or produced a very low-quality equipment necessary both for whitewater paddling and for camping (2) paddlers wanted to win competitions organized by the community and needed better boats. For example, the informants said that there were only two boats for white water available in the shops and those boats were not perfect: *“There were*

two types of baidarkas; one was produced in Germany (RZ) and the other in USSR (Salyut). They both were very clumsy. But initially we used them, even for the river trips. But they were really clumsy. And then somebody thought - if we can make such a boat ourselves, it will be maneuverable and we can win the competition! (Interview 1)”

To create innovative equipment and invent new solutions white water paddlers enjoyed certain skills and competences. The majority of community members were students of technical universities, studied engineering or were engineers (Tourist Club Tushinkij, 2012). They used engineering skills to make drawings of for example the boats (or the tents) and other equipment items. According to one of community member: *“The tourists were mostly engineers, for whom it was a usual routine to make a drawing, ...in our club they constructed different designs of the boats, and a year later they came up with the boat improvements for the competition (Interview 2)”*. Such engineering skills were necessary both for radical innovations and for incremental improvement of existing equipment.

Innovative agency of community members was limited by the planned economy regime. This means that they were not able to buy necessary materials in the shop and they had to find the way to get them. In other words their innovative agency depended on the availability to get materials used for boats construction as well as for creation of tents, sleeping bags, dry sacks, etc. To get materials one had to work at the factory where such material were used (for example, one of community members worked at Aviation design bureau) or have some acquaintances that would have access to different materials.

Community role in innovation process

Community played an important role in innovative activity of its members. It supported innovation creation among the paddlers by providing a special environment of creativity and innovativeness. We can say that community had innovative agency because it fostered innovation among its members despite the indifference towards such innovations created by the economical regime.

This whitewater paddling community often gathered for competitions. Usually paddling competitions lasted for two weekend days, and united hundreds of participants who stayed in a camping. Competiveness motivated different teams to improve paddling technique as well as to improve existing boats and create new ones. According to one interviewee, for each competition phase his team constructed a new boat that was slightly better than the previous one (Interview 3). At competitions the boats were tested before they could be taken to complex white water rivers: *“The competition was the mean to test all our equipment, but primarily the boats. If the*

baidarka behaves well at the competition, it becomes clear that such boat can be made at a larger scale (by many paddlers) to be taken to white water” (Interview 2).

Competition gathering fostered the knowledge exchange and the diffusion of innovations. Community members freely revealed innovation-related information to each other. Thus many of them remembered that at the competitions they would walk to see how things were done by other paddler: “*We were walking through the camp and looking at things invented and used by the others.*” (Int.1). According to this interviewee it was a common practice to ask how certain things were done. Moreover, it was not common and socially not acceptable to hide the details of how certain equipment was improved or created.

Furthermore community helped individual innovators to get materials necessary for the creation of new equipment. For example before the start of a new school trainers prepared materials - aluminum pipes for the frame and textiles to cover them. However the students often invented the design of the boats themselves. According to one paddler, if community members had access to some materials necessary for equipment creation, they would always offer to the community to get such materials (Interview 2)

To sum it up, community provided a forum for innovators to exchange ideas, to improve their skills and to get materials. Moreover it created an environment where innovation became a routine and ordinary process. In other words innovation became a common practice implemented to some extent by every community member.

Emergence of radical vs. incremental innovation

This community created a few radical innovations. Unlike incremental innovations that were constantly introduced by many community members, the radical innovations appeared only several times. Moreover, unlike the authors of incremental innovations who remained unknown (often in the environment of constant innovation, incremental innovations became common knowledge that circulated in the community) the names of those who introduced radical innovations were well known to any community member.

One of such radical innovations is the construction of a new baidarka that had both hard frame and the inflatable part. There were attempts and constant experiments to create such a combined boat within the community and outside it, but usually the inflatable part was small and only prevented the boat from sinking. Three community members made the inflatable parts of the boat significantly bigger and its shape thus became close to optimal and remained the shape of a plastic kayak. Because of this, the boat significantly improved and became very maneuverable and easy to control. Moreover, the new boat was much lighter and thus easier to carry. This new boat started to win all the competitions. According to one of the paddlers

(Interview 2), after the authors presented their boat to the community the issue of the boat shape and its construction was settled. Community members were not looking for new shapes anymore. Paddlers started to make similar boats to paddle on whitewater rivers (Tourist Club Tushinkij, 2012).

Another example of radical innovation is the creation of an inflatable catamaran by one of the community members. Compared to manufactured rafts this boat was considerably more maneuverable but was also save to use on complex white water rivers. According to the inventor of catamaran, he wanted to create a boat for complex white water with high carrying capacity for autonomous trips (Papush, 2001). Being an engineer he made many drawings before he came up with the idea of a boat made out of 2 inflatable balloons attached to each other by a frame in 1976. Paddlers were located on the balloons. After that constructor, who was a student consulted an experienced community member, who approved the innovation. Interestingly, first this new boat was used to secure considerably less safe baidarkas on difficult rivers, and only later the community members started to use this as the main boat on dangerous rivers. This innovation spread in the community very fast, and according to its inventor: *“A year later the invention (in 1977) I could meet a person who I did not know who would excitedly tell me...that the rafts is trash, and what a beautiful thing catamaran is!”* (Papush, 2001)

As for incremental innovations, let us consider the example of the sleeping bag. Manufactured sleeping bags had several shortcomings: they were heavy, not easy to dry and it was not always possible to zip several of them together. It was a common community practice to sew the sleeping bags from different materials (that had considerable less weight and if they became wet they dried faster) and to make them zip together. This allowed the sportsmen to take three sleeping bags for four persons to carry less weight. There was no established scheme how to make the sleeping bag and the author of this innovation is not known. According to community members, it was clear that manufactured sleeping bags did not satisfy them and it was natural to think of making this item, it was easy to sew and no special knowledge was required.

So we have seen that the creation of radical innovations in the community can be traced, and the authorship can be established. As for incremental innovations their authors remained silent especially in case of innovations that did not require special knowledge and skills.

Cooperation with the industry and the state

Innovation communication between community members (those who wanted their boats to be industrially produced) and industry was hard at the time of white water paddling prime. Industry did not want to recognize the innovative agency of the paddlers. According to the

community members despite the desire of the consumers the industry did not want to modify manufactured baidarkas, even though community members provided the drawings and samples of successful boats.

Still there were several examples of such communication. Thus one innovator confirmed that the boat made by his team was copied by many other people and became popular. Therefore they initiated communication with one factory to produce a similar boat. After the trial boat was created and tested the innovators proposed some changes however the factory did not want to introduce the changes and stopped communication with the inventors (Tourist Club Tushinkij, 2005). Still the boat production was launched.

Furthermore three inventors of the combined baidarka (hard frame with inflatable parts) managed to get the authorship certificate. Interestingly, besides the recognition of their authorship they did not benefit at all from getting this certificate. Moreover, getting it meant that inventor handed the idea and drawings to the state gratuitously. According to one informant, one factory attempted to create a boat based on that drawings but did not succeed.

Such disability of the industry to manufacture good quality contemporary equipment motivated some of community members to create their user – production unions after the state finally allowed private entrepreneurship in 1988. The majority of such unions were set up by the members of tourist clubs who on one hand were experienced in equipment innovation and on the other hand were based at factories where they could get materials and launch production.

So we can see that in soviet times both industry and state were not interested in user innovations in this field. It was rather exceptional when such innovations were implemented. Moreover, industry did not have motivation to innovate. However this encouraged users to set up user firms after this was allowed. They had enough expertise and experience in creation of outdoor equipment.

Discussion and conclusions

In this study we have considered the notion of innovative agency and have applied it to the analysis of innovative activity in the community of whitewater paddlers which flourished in two last decades of the twentieth century. We have considered the actors of innovation and the process of innovative agency delegation. We have seen that creative and innovative environment emerged in this community encouraged innovation by almost any community member. We have discussed both incremental and radical innovations that were initiated by the members of this community. Furthermore we analyzed the process of interaction between user – innovators and equipment producers.

In this network we can trace the innovative agencies of paddlers, their community, the industry and the state. The research results illustrate that in this actor-network innovative agency moved from industry (that created first boats) to lead user community that enabled innovative agency of lead users themselves. Further innovative agency was delegated to the user firms set up by community members.

Historically the community innovation activity was going on in the frames of USSR planned economy. This means that the industry produced the goods planned by the state and consumers' needs were not really considered. In such environment innovative agency of users was not recognized. However lead users experienced needs in new and innovative equipment that would satisfy their needs. Therefore they started to innovate themselves. So it could be claimed that planned economy regime stimulated the innovative activity of lead users.

Similar to previous research (Herstatt & Von Hippel, 1992). we can call community members lead users. They indeed experienced the needs in new equipment that began to be produced and used by ordinary tourists years later. However unlike user innovators described for example by Hienerth (2006) and Franke & Shah (2003) the members of considered community not only had to invent new equipment but they also had to get materials necessary for its creation. Therefore using Bourdieu's terms we can say that innovative agency of whitewater paddlers depended on their economic, social and cultural capital.

Analogically to Oost et al. (2009), Luthje et al. (2005) in our case community played the key role in the innovation process. We can consider the innovative agency of community in providing its members the freedom to innovate. It created such an environment where innovation and creation became usual routines. Community enabled the exchange of knowledge, ideas and solutions. This facilitated and shaped the emergence and dissemination of two radical innovations as well as reation of incremental innovations (constant equipment improvement) by the community members.

In line with van Oost et al. (2009), we can trace the process of mutual co-shaping between community and equipment innovations. On the one hand these community members invented and distributed two radically new boats, and on the other hand these boats (being safer and easier to control, as well as easier to transport and lighter to carry to distant rivers) attracted new community members. The whitewater paddling became more popular and more dynamic sport tourism activity.

Due to its qualitative and explorative character this study has some limitations (Neuman, 2006). The innovation activity in the community chosen for the case to study might be very different from such activity in any other community. The chosen community existed in last two decades of the 20th century, and the innovation processes in a contemporary amateur community

might differ. For the further research the authors propose to select a modern community to compare innovative agencies its members to the ones of the whitewater paddlers. It might be interesting to analyze innovation communication, and communication with the industry in contemporary economical setting. On the other hand it would also be interesting to study the user firms that emerged from the community described in this study.

The results of this study could be used by other researchers to see how intensive innovation amateur community might function. Furthermore this paper reveals the skills needed for innovation in such community. We have shown how innovation related information might flow in the era of Internet absence. We propose the policymakers to pay better attention to amateur communities as the source of innovations. To encourage user innovations politicians might consider the experience of whitewater paddling community.

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