# Integrating community values in the design of a mobile application for parkour practitioners

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**ABSTRACT**: The paper elaborates on the way in which groups understand parkour at a value-based level and the influence that this mentality has on the development of a mobile application. A special attention is given to the conflict which emerges between the parkour practitioners that want to make sure that the activity keeps its structure intact and the fact that the mere introduction of a mobile application will bring changes in the way that parkour trainings take place for the practitioners.

The development of a mobile application is mainly done with the purpose of supporting and reinvigorating the practice, but this can also modify its structure. It is the fear for this modification of the activity's structure that makes parkour practitioners be very critical and reject designs that do not perfectly conform to the standards that they use when defining the activity. The small sizes of the groups makes them especially vulnerable to influences and keeping the original values of parkour intact becomes a priority for them when accepting the involvement of mobile technology in their trainings.

Conclusions are developed from the research deployed with the purpose of bringing design improvements for the Traveur mobile application targeted towards parkour practitioners. The research includes a wide variety of techniques organized in different steps and layered on different levels of interest. The conflict between keeping parkour values intact and designing for the parkour community came up during the process of gaining knowledge on the phenomenon and finding a design which complies with standards of a commercial launch.

## Introduction

This work started from the attempt of finding solutions for redesigning and for improving the Traveur application. While the research was aimed towards all functions that the mobile application offered, there was one function which became unanimously rejected during user studies. The test subjects, which were active practitioners of parkour, grounded their reaction in the parkour mentality and in the life model that this activity implies and promotes.

A large amount of effort went during this research project in understanding where the unanimity comes against the design of the training feature while interviewing different parkour groups. For that reason, the thesis is also equally aimed towards understanding the particularities of the parkour community and towards finding a way in which mobile technology can become part of it.

What is remarkable about the redesign of the training function of Traveur is the extent to which small groups which are part of a larger community are especially demanding on preserving their identity and core values. Such small groups are in a process of continuous development. Introducing a mobile application can influence the way in which members distribute roles and maintain the activity's philosophy. It is therefore a sensitive process that can fail at several points and lead to the rejection of using the mobile application.

Designing for the fragmented parkour community is difficult, since differences between groups often occur. This implies trying to add cohesion to the groups and taking the smallest denominator when respecting and adapting the design to the important mental dimension which lies behind the activity of parkour. The small sizes of the parkour groups make them especially loyal to grounding factors that give them identity and make them part of a larger concept, which is parkour. Another issue is that of finding a balance between using mobile technology for supporting the activity and the influencing the way in which traceurs train and interact with each other. The influence is unavoidable just because of the fact that new technology is being introduced in the way an activity is practiced. The difficulty of the task is that of scaling the influence to an acceptable level in the perception of the community.

Parkour is more than a physical activity. It has become a new subculture for the practitioners, shows Murray [18]. He also talks about freedom and structure as essential parts of parkour. While structure is important and needs to be respected, the activity's purpose is that of achieving a liberating feeling from urban constraints. Parkour is loaded with a large array of ethical concepts that suggest an open and empathic lifestyle that should be extended from the activity into the pratitioners' day-to-day life.

## Background: What is parkour?

Parkour is an activity which defies the norms of urban space by using objects which support social conventions in a completely new way in order to get ahead [4]. Parkour practitioners (called traceurs) will jump over a metal rail instead of walking around it and they will climb a wall instead of seeing it as blocking access.

Parkour has been defined in literature as a method of navigation through urban space [2] or as a body, a city and a media culture [15]. Jonasson has a similar definition of the activity, while also mentioning the importance of efficiency of moves [12]. The book Extremsport underlines that efficiency is a core element of parkour. Practitioners move as fast as they can, while at the same time use as little energy as possible. The efficiency concept also includes avoiding injuries as much as possible. The book also notes an unofficial motto of parkour, which is ”etre et durer” (to be and to endure) [20].

Most important, parkour combines mental dimensions with sport-related ones. Mentally, it is an alternative attitude towards social conventions and city architecture. At the same time, it is a psychological struggle against fear. Physically, parkour is a way of regaining the strength and condition that “native people” achieved through climbing trees [4].

Klausen sees parkour as a body, a city and a media culture [15]. This comes from the mixture of physical strength, a redefinition of urban space and a phenomenon in the online environment. Genuine parkour doesn’t take place in a gym or anywhere else other than the city, with its buildings and artificially built spaces.

**Dynamics of parkour groups**

A general analysis on parkour dynamics shows that traceurs usually train in groups structured in 1-3 instructors and several pupils. The role of the instructor is to develop a training programme, to inspire, to support and remind of the mental dimension of doing parkour. The size of these groups varies and traceurs can meet for training almost every day, with variations of instructors.

It is especially the more experienced traceurs that meet outside these organized groups for training in a spontaneous manner. They are an open circle in need for more inspiration in moves and suggestions for places that are favorable for parkour.

The research brought to light several key features that define parkour and that influence the design of a mobile application targeted towards the group. Most important, parkour is noncompetitive.

> “It should be one self that evaluates own performance. One trains for himself and not to compete with others.” (subject 1A)(author’s translation)

Personal achievements are most important, including setting personal goals and training to reach them. Parkour has as role and scope sharing knowledge, inspiring others. Each person is different, and development should then take place at individual speed and not subject to comparison with other traceurs. It is only the individual that decides the pace of his own development.

**The bigger picture that Parkour fits into**

Parkour's nature brings it close to other urban activities, such as skateboarding. It takes place in the urban space, which it uses and defies in attempt to recreate it. Knowledge about the sport is passed from practitioner to practitioner as a set of unwritten rules. Daskalaki et al. suggests that Parkour originally was a political transgressive activity, aimed at the inhuman architecture of the Parisian suburbs where the sport was invented:

> "The infamous Parisian suburbs, where *parkour* was invented, are among the most alienating and dehumanising urban clusters in the world." … "It is easy to see *parkour* as a direct response to these spaces, an attempt to 'trick' them, through unconventional use, into yielding creative possibilities and a sense of one's own body and humanity." [6]

The grounding scope of parkour is, target in this perspective, the remodelling of urban architecture. Another perspective is that of remodelling urban lifestyle and its limitations through a new type of physical training. Parkour has been compared to activities that kept the bodies of primitive people lean, trained and alert in the old times. Its emergence is, in this case, an uprising against the modern body training routines and the body's standard way of interacting with the space it lives in. Brown [4] notices that urban space is normally defined by the purposes that it is supposed to serve. By finding new uses and new ways of perceiving the urban objects, traceurs redefine the objectives of the shared urban space and eventually develop a different 'eye' for the environment. Saville calls this the 'spatially transformative powers' of Parkour:

> "When the traceur attempts to master some movements through space, such mastery, as it occurs (or not) is always accompanied by an emotional refiguring of spatial possibilities. In this sense, parkour speaks quite forcefully to an enchanted notion of place which, through wonderment, imagination and participation, is in continuous composition." [22]

Saville also congenially identifies the emotion of *fear* as a main challenge and driver in Parkour. This relates to Klausen's analysis of Parkour as a way to 'constantly challenge borders and do what nobody thought possible' [15]. Surpassing the state of fear when exploring new uses for the urban space is considered to be a step above the traditional relationship.

Together with the gain of popularity, the activity brought new members that are bringing change in the rules that are passed on. As a result, parkour is transforming. For that reason, more traditional practitioners of the community are making efforts for keeping the activity within the coordinates of its original values.

The similarities between the Parkour community and the Skateboarding community are described also by Karsten and Pel [13]. Both cultures maintain a collaborative ideal in which the individual's progression is most important. Players will often gather spontaneously (or on very short notice) to train together, and will congratulate each other on succeeding with a new move rather than engage in informal competitions. Although some individuals are known as 'gurus' within the community, there is

no formal ranking system and a general resistance to hierarchies exists. For now the majority of the traceurs are male youth; in Sweden they also seem to primarily belong to the middle-class and be of Swedish origin. These traits are shared with the skateboarding community.

Another common aspect between skateboarding and parkour is the physical experience. Day, Andrew J. underlines a certain mystique that is surrounding it. At the peak of the jumps that both skateboarders and traceurs make, the body is temporarily weightless, and fully committed to the movement but has yet to negotiate recovery. Day points out that the ephemeral experience between committing the body and ensuring the move's completion leads to an exhiliration experience during the momentary loss of control. He says that this is the 'buzz' that forms the attraction. [7]

Parkour is becoming increasingly organized. In Sweden, it is now possible to find organized training clubs as well as partake in competitions and performances. Some clubs train together and organize events which underline the openness of the activity. Members have a mainly geographic dependency to the club and change to another one together with moving to a new city.

**Research on the Traveur application**

Traveur is a mobile application in a developing stage that has the ambition of becoming commercially launched in the future. The design stage of this master thesis had Traveur as a base point, with the purpose of delivering a design that is in line with the parkour community's culture and which would be accepted and used in real life by traceurs.

This paper has been inspired by the redesign of the Training function of the mobile application. This was the function which brought out in the spot light the strongest conflicts with the community's values. Initially, the function was designed while holding the structure of an academy in mind. Here, traceurs could view videos with training moves that they need to master and then publish online in order to receive votes of the community and eventually graduate.

The first research stage used a wide variety of data collection methods, such as internet-based research, videos, competitors' analysis, observation and participatory observation. It was an elaborate process which looked to reach in-depth understanding of the parkour mentality and cultural values that support the parkour groups, while also keeping the activity's identity alive.

The user studies were structured in three stages: an extended interview, a rapid prototyping section and a presentation of Traveur, followed by reactions and judgments. Three subjects from two different Swedish parkour groups took part in the user studies which lasted between 45 and 60 minutes and were applied individually. Their answers helped to radically transform the design of the Training function of Traveur, but also added important details to the other features of the mobile application.

**Conflicts with the initial design of the Training feature**

Early field studies showed that the academy structure of the Training feature builds hierarchy and encourages competition, first of all. This has unanimously been pointed out by the interviewees, who saw the grading system as a false acknowledgement of competences. This could potentially lead to a change of mental focus and concentrate the traceurs' efforts on gaining the appreciation of others instead of their own.

> "People have different ranks, but this concept is far from what parkour is. You can train at different levels. One might be better at balance and one better at strength. Who can say which one is higher in the classification? You have to be distanced from having a ranking system. It doesn't match with what parkour is." (Subject 1A) (author's translation)

Traceurs need to individually set their own tempo and personal goals while doing parkour. Moving too fast and trying too advanced moves can lead to accidents and to even more set-back in training. Also, having the same predefined training path for all traceurs is not realistic when talking about a sport which is based on spontaneity and which is looking to adjust so much to different urban spaces.

One thing that the Training function did manage to accomplish in its original structure is that of bringing ideas and inspiration for the training through the videos found in the academy tests. This should have taken place oblivious to ranking and grading, on the other hand, only for the creativity boost of trainings.

> "Sometimes you don't focus enough and you don't know what to do next. Which is the next step. Where should I go? In [e.n. the city] there are not enough places to train. This is too difficult, this is too easy and I stay somewhere in-between." (Subject 1B) (author's translation)

The academy version of the training feature also limits access to videos, depending on already submitted videos and, thus, to ranking in the academy. When looking in the video library for inspiration, traceurs have access only to videos that they have already seen or trained on. All other videos are locked. This means that there is no real new information that could boost their creativity, which makes the application less interesting.

Safety concerns have been expressed by two of the interviewees for people attempting to accomplish moves that they are not ready for only in order to move faster in the community's hierarchy. Another identified problem was that it is difficult to set difficulty levels, since different practitioners have different predominant skills, such as balance over strength, which are difficult to evaluate in terms of importance.

The value that a traceur has comes not only from the capability of accomplishing individual moves, but also from creativity and mind strength. Such dimensions are impossible to be integrated in an evaluating system.

Schubert underlines that for community members to be active, they need to see their participation in the community as a source of valuable information [23]. They should gain something and in the case

of the parkour interviewees, this can be summarized into: information, inspiration, new contacts, freedom of spontaneity.

**Participatory design methodology in Traveur**

Participatory design's origins are found in Scandinavia, where it started being defined as early as the 70's. The concept appeared together with the introduction of computer systems in the jobs of workers. It was then that Professor Kristen Nygaard involved the persons that were using the machines in the design process. This was followed by a series of projects in additional groups that had as scope to translate different actors' needs, goals, motivations and values. [9]

The project's methodological approach encouraged participatory design and included a wide variety of data gathering methods, such as collaborative workshops, internet-based research, video analysis, observation, participatory observation and user studies. The user studies were composed of qualitative interviews, functionality prototyping by the users and testing the Traveur prototype. Later iterations added mock-up testing and additional observation and interviews with the users, in what became a continual participation from the users [26].

A tight contact with community members was established already from the start of the project, in hope that the first iteration of the application would be closer to the needs of the parkour community. The functionality of Traveur was improved through worth centered design (WCD) iterations, which involved design management sponsors, users and other stakeholders [5].

AirWipp, a Helsinborg-based parkour group helped with the development of an exploratory design through a series of workshops. Cockton sees it more important of getting the right design as early in the design process as possible as opposed to improving an already defined design through measuring users' experiences. He also sees the prototype as a means of obtaining better responses from users on needs that have a higher "worth" of being addressed by the product. Changing decisions were based on what could be seen as a usability problem or not, on what seemed to matter [5].

The problems with the design started to surface after testing the first Traveur prototype with Uppsala Parkour. From that moment on, the prototype and new mock-ups were continuously tested for building new design iterations. Conceptual, empirical, and technical investigations were employed iteratively for adding layers of usability for the application in real-life, as Friedman, Khan and Borning also describe when discussing the concept of value sensitive design. The step towards worth centred design (WCD) was actually made by not limiting de research to empirical and psychological concerns. Several essential questions could be discovered only through participatory design and were later objectively balanced and valued, leading to new iterations of the design.

The need for a critical examination of the users' discourses is also underlined by Cockton [5]. The individual discourses that parkour members were presenting were a reflection of the collective

discourse of the community. Although they expressed values that seemed to be deeply and unanimously appreciated, their “worth” in the usability of the application was thoroughly evaluated.

As in most user-centered design projects, data analysis was done qualitatively and led to a gradual construction of the design, based on confirmations and re-evaluations from the community. [27]

**Usage patterns – long-term use**

An extended user study had as goal placing Traveur in a real-life context. Four traceurs were each given the app on an iPhone during two and a half weeks. Three of them, two men and one woman, were aged between 15 and 17; the fourth was a slightly older man of 24 years. Some of the training sessions during this period were observed, and all four traceurs were subject to an elaborate interview after the test period.

The goal was to better understand how the Traveur prototype would correspond to their actual training needs, and if using Traveur would in some way change their practice. We selected to focus entirely on the map function as it was seen as the most promising functionality, leaving the training function for a later and more large-scale public test. The major reason for this decision was that the training function was being re-implemented at the time, but also because the training function was directed at less experienced traceurs, while our participants were advanced practitioners. The advantage of turning to advanced traceurs is that they train regularly on the streets, whereas newcomers tend to train more in gymnastics halls. During summer time, when weather conditions are favourable, our participants reported that they would train outdoors almost on a daily basis.

The Map function was the one subject to testing, but helped the traceurs see potential for integrating mobile technology during their training. They were all training for at least two years and during summer time, when weather conditions are favorable, they train almost on a daily basis.

Before having Traveur for testing, the only solution for meeting eacother for spontaneous trainings was that of placing phone calls, sending sms:s to eachother or posting messages on the Facebook wall of the parkour group that they are part of, for announcing when and where others can join them for training. The latter solution often took away the “spontaneous” nature of the trainings, since such messages were published in advance.

The syncing function was thought to be among those capable of bringing the highest amount of change in the training habits.

> ” Then [e.n. previously using Traveur] you would just text or call someone, but now you can sync.” (subject 3A) (author’s translation)
>
> ” It is easier to find someone else who is training [e.n. parkour] if you have an iPhone with Traveur on.” (subject 3D) (author’s translation)

> ”I would have just sent to everybody” (sync messages for meeting to train parkour) (subject 3C) (author’s translation)

Having a larger list of contacts that they could reach through Traveur is also one context that was seen by the subjects as essential for a more extended use of the application. More information and more contacts that they could interact with would then be directly proportional with the novelty that the app could bring in the way they train.

The sync function also led to training games which were not taken into account during the design process. Subject 3B accounted of an example of an unusual use of the mobile app during the testing process:

> ” Quite parkour-inspired is to go away from the person that follows after. It was really fun when we tried it. It's fun to play with it.” (subject 3B) (author’s translation)

The subject considered including this in the actual training as a ”new thing”.

Having the mobile phone in the pocket during training was not considered a problem by the subject. He explained that many of the traceurs use a string that they can attach belongings, such as keys, or mobile phones to so that they don’t jump out of the pocket.

Another advantage of the sync function over traditional technology used for meeting up with other traceurs was noticed and explained by subject 3B:

> “ That which happens is that you can only turn on the mobile and leave it aside. You don’t hear if someone is calling. But if you can just start Traveur, sync with everyone, then people can accept [e.n. the invitation for training] at their own pace.” (author’s translation)

Subject 3A mentioned that he usually rings or calls the same persons for training, while the sync function could make it easier to let new persons as well know that he is training and willing to have others join.

Before using Traveur, there was no other really reliable source of new spots, noticed most of the subjects.

> ” It was just to go around and look [e.n. for a good place to train parkour]. If you want a new place that's just to go around and see what works well for one. ” (subject 3A) (author’s translation)

Syncing instead of sending sms:s or calling friends.

Subject 3A found information of new training spots that he didn’t know of (already in the prototype mode). The spots function is something that he liked especially much from what Traveur had to offer.

> ” I would train more in other places than those where I usually do. If I seen on the map a new place, then I would go there to see how it looks. ” (subject 3B) (author’s translation)

**Results of the studies**

**Community** This study again confirmed that the mobile community function was appreciated. In the limited context of the study, the participants only had access to each other, but they expressed a strong wish to increase their number of contacts. The potential of this feature being available at a later stage of the application's development made them see a wide range of possibilities. Making new contacts within the community and seeing innovative training methods from other participants was thought to offer great potential for own development as well.

**Map** The map function provided several new opportunities for the participants. During the testing period, the traceurs set new spots on the map, added skills and commented on the additions of others. The videos that they uploaded came from YouTube and were previously edited by members of the group that they were part of, confirming our expectation that video production is done separately from training.

The map-marking feature received positive reactions from all subjects and was thought to have large potential for positively influencing trainings. One person reported finding new training locations that he unaware of being suitable for training parkour. This was seen as being especially useful when going in a new city by all subjects.

> " I remember when we were in Malmö, X and I and we would meet some of those who were training parkour in Malmö. If we had parkour spots as there are in Traveur ,it would have been easier to find places to train. We used a website for parkour spots. It was really complicated to find. We checked where we were on the map and then where that was on the website's map and it was very very complicated." (subject 3B) (author's translation)

Before using Traveur, there was no other entirely reliable source of information on good training locations, information most of the subjects wished for.

> "Actually, it would be like this. If I'm on my way home from school and see a new place that I think it is good [e.n. for training parkour], I would try to train there." …"Then I would definitely train more. I would explore more as well. I would take more time for practicing new things." (subject 3B)(author's translation)

As searching for new places is time-consuming, the sharing of knowledge about training spots was thought to have high potential for adding novelty and diversity to the current training habits. Ameel & Tani also talk about the connection to the enviroment that is specific for parkour practitioners. They say that parkour enthusiasts have as goal not only own development, but also developing a relation to the surroundings and respecting the environment which shapes and defines the actual training. Being more aware of the training potential that surrounding spaces offer can thus add to the practice of parkour [1].

**Meet-up** As expected, the meet-up functionality was highly appreciated. The participants reported that they currently used multiple modes communication for arranging meetings, such as phoning,

sending sms/texting, or the posting of messages to their Parkour group on Facebook. (This latter solution does not support spontaneous trainings, since such messages had to be published in advance.)

The meet-up function was thought to be among those capable of bringing the highest amount of change in training habits. In particular, it was seen to provide good support for spontaneous trainings, as it allows interaction in real time.

> ” Then [e.n. previously using Traveur] you would just text or call someone, but now you can send a meet-up message.” (subject 3A)(author’s translation)

Integrating the meet-up function with the mobile community function was also seen as promising, as it did not require them to know the phone numbers of all others in order to initiate a joint training session.

> ”It is easier to find someone else who is training [e.n. parkour] if you have an iPhone with Traveur on.” (subject 3D)(author’s translation)
>
> ”I would have just sent to everybody” [regarding meet-up messages] (subject 3C)(author’s translation)

Another advantage of the meet-up function over traditional technology used was noticed and explained by subject 3B. He said that having the possibility of starting the syncing function and then leaving the mobile aside requires minimum interaction from him. The other practitioners that he innitiated syncing with can see his position on the map and answer at their own pace, without need of more action. This allows him to continue training undisturbed.

The meet-up function also became incorporated into the training activity. During one participatory observation session, the traceurs used the meet-up function to invent a new training game. One of the group members would run away from the others, who were given the objective to catch him. The rest of the traceurs split into three groups, each with one person carrying one of the iPhones with Traveur. They gave a head start to the traceur being chased, and then started chasing. The group member having Traveur on the mobile would keep the iPhone in their hand most of the time, and in a couple of situations, when needing both hands, would quickly put it in a pocket.

From time to time, the chasing group would stop to look together at the map, in order to identify the position of the runner on the map. They would discuss how to best catch the runner with everyone contributing suggestions for shortcuts in the urban space in order for their team to be first. The area where the training was taking place was extended over a large area familiar to the Parkour group.

The invention of this game shows how much the Parkour community still identifies itself as a ‘fun community’ [8] rather than a sport. One of our trial participants comments on this occasion indicating the same:

> ” Quite Parkour-inspired is to go away from the person that follows after. It was really fun

when we tried it. It's fun to play with it." (subject 3B)(suthor's translation)

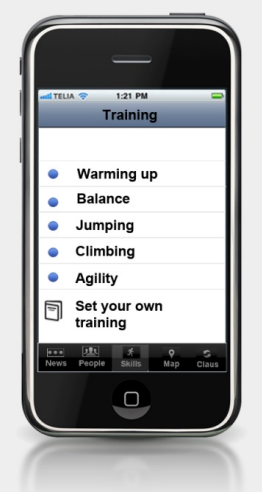
The subject considered including this in the actual training as a new "thing".

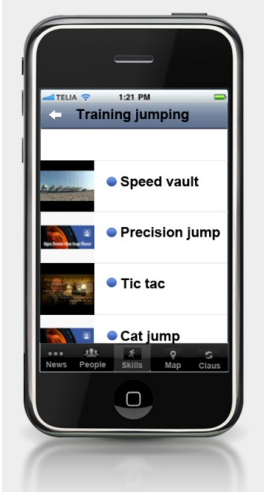
The way the meetup function was integrated into training illustrates the strong element of playfulness that this Parkour group embodies. It also illustrates the viability of our original assumption that the spatial aspects of the practice can be medialised, just as the bodily aspects already were.

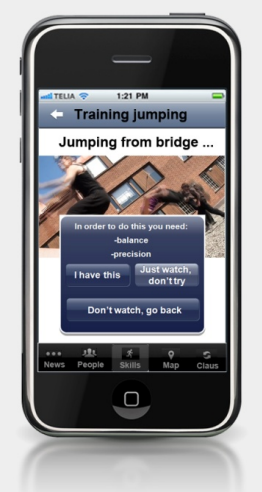
**Redesign and final results of the Training feature**

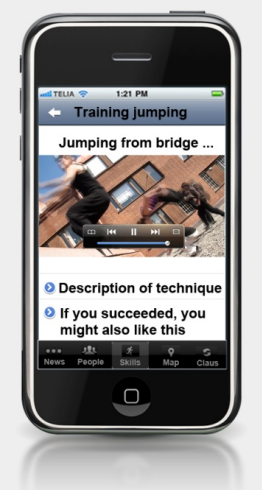
Each problem identified in the initial design of the Training feature was listed and addressed individually. The main identified problem was that of *the grading system* that the academy structure created and this was first dissolved. Through this, that entire academy principle disappeared, also taking away the steps that controlled the evolution of the traceurs' training.

The access to information and inspiration resources that videos provided traceurs with is something that the interviewees considered to be a plus of the mobile application. For that reason, redesign work took place especially on leveraging this feature while excluding the conflicts that the academy concept was having with parkour's philosophy.



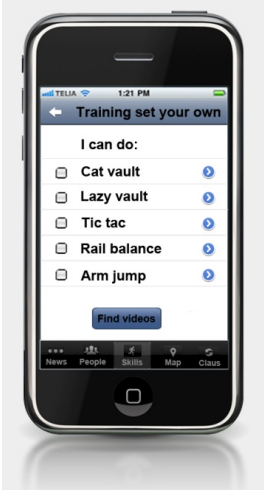



*Image 1: Screenshots of the Flash mockup of the training function of Traveur*

The Flash mockup of the Training function (which can be seen in the print screens earlier) was used during the previously described field study. Respondents were presented the mockups of the training function after the two and a half weeks of testing the Traveur prototype. After this period they were thought to have gained a good understanding of Traveur's capabilities and purpose. They answered questions about the design's quality and tried to formulate suggestions for possible improvements.

The improvements were considered to be radically more in line with the parkour mentality and also with the application's structure.

> "It is good to easily go in, choose out two or three videos. It used to work to go on YouTube and look at "this is what I want to learn" and then go out and practice it. But now you have the phone and a bit more specific can choose things to train." (subject 3B)(author's translation)

Being given a gallery of videos to browse through provided the traceurs with the possibility of creating their personal training program, according to their personal skills and interests.

Having a description for the technique utilized in each video was also a positive element:

> "It can be good to be able to see this [description of the technique], when one is beginner, for example." (subject 3C)(author's translation)

The warning text, stating the prerequisite skills required for a move, was also appreciated. Traceurs saw these videos as a source of information and inspiration. Giving open access to information and enforcing own risk evaluation was thought to be an advantage in the design.

> "It's like this, one must try for oneself. Achieve by oneself. One must try. Even if one knows "I have bad balance". All should try so that one sort of gets better balance when trying new things." (subject 3D)(author's translation)

Overall, the traceurs found the design very much inspired by what 'Parkour is', or what it is perceived to be:

> "One should decide by himself if one can or can't accomplish a move. […] It is really good and spreads a better message about Parkour." (subject 3B)(author's translation)

**Communities and their interaction with mobile technology**

Parkour is a community that is active mainly in a space which is independent from technology and virtual solutions. Mynatt describes the community as a social phenomenon that establishes and works with meaningful connections that take place between people [19]. The parkour community is also exceptionally open. Anybody, with disregard to age, physical capabilities, beliefs or belonging to other communities or cultural status can join. In fact, female members are especially encouraged to be

active within the community, as this is one of the most visible lacks of homogeneity between members. The only acceptation criteria is possessing a genuine interest for the way in which parkour breaks urban plans and possessing the will to understand and take in the mentality which stands behind the way of training.

Another definition applies even better to the parkour community, if considering its scattered nature and unity in values rather than physical unity.

> "[Community does not] imply necessarily co-presence, a well-defined identifiable group, or socially visible boundaries. It does imply participation in an activity system about which participants hare understandings concerning what they are doing and what that means in their lives and for their communities" [16].

The scattering of members in smaller groups is something that strongly supports and reflects the online structure of communities. From this point of view, the parkour community is highly similar to the general structure of online communities. The transfer should take place easily, as long as members would agree to embrace it.

The parkour community can be seen as a community of practice, if considering Keitzmann's definition of the concept. He sees the sharing of experiences coming from members as an essential unit, which gives the community the opportunity of debating and sharing opinions which help redefine themselves [14]. This also happened until this point in the online environment, where some dedicated forums became fields for debating what parkour is and how practitioners can improve themselves. The mobile environment brings the opportunity of adding one more space for this type of information sharing and learning, as a mobile application can reunite a large number of traceurs in the same space.

Mynatt's article also underlines that the concept of "network of communities is detailed", an aspect which applies especially to the parkour community. Such communities are technologically mediated, durable, have multiple interaction styles, capability for realtime interaction and have a multi-user structure [19]. This all applies punctually to the parkour community, since this has been built especially on technologically aided supports. It all started and developed in and through the online environment.

The concept of "knowledge cooperation" defines the action of sharing and contributing to the maturing process of knowledge in an informal way [3]. It is this knowledge that motivates and encourages community members to participate. It is the duality between duality of participation and cultivation that makes the designing of communities which participation in the knowledge development supports the actual growth of the communities, shows Bettoni and all.

**Trust and utility**

The utility of new technology is difficult to put into words for those that are comfortable with a traditional structure of an activity. This becomes even more pregnant if the activity initially used no or

minimum technology. The designer's role is also that of not contaminating or modifying the activity towards an indefinable direction.

In the case of parkour, technology was present at a minimum level and used in a different space than that of the training. Many parkour clubs use Facebook or websites for transimitting information to their members and members use social networks for creating and supporting new contacts in the community. YouTube is the space where parkour took off through the impressive videos with tricks that gathered record views. Still, for them, technology was tied to the computer and to the homes. Parkour took place in the city, in the urban space.

Trust accumulated by the previous reliability of technology makes a starting point for accepting new technology, but is not sufficient. At the same time, problems brought by technology in previous experiences are transferred to the mobile environment.

> "We had parkour-sweden.se. It didn't work, because people sat and talked about how to do a backflip instead of training." (subject 1A, author's translation)

Mobile technology breaks this pattern. The mobile device can be constantly present during trainings, which makes it compatible with the spontaneous nature of the activity. The possibility of taking videos has been both appreciated and seen as insufficient for taking ggood quality videos. Some practitioners already used mobile phones for taking videos of tricks that they were practicing in order to view later and improve their technique. Other practitioners were reluctant to posting videos that didn't have high quality when sharing them within the community.

Many parkour groups were active on social networks and many subjects expressed need of Facebook, sms or calling function of mobile phones in order to plan trainings and communicate to other practitioners.

Mobile phones incorporate a large sum of functions that were already used by practitioners. They are the only type of technology that is already present to a certain extent in the planning and communication between parkour members.

Mobile phones were already contributing to offering a space where practitioners could share experience. Adding more structure and form to this mobile space through an application sets the practitioners in a doubting position, since the same structure might apply to the community and to the activity. It is a fear for contamination through extension from the medium to the activity. For that reason the application's structure and core values are not allowed to convey from parkour's structure and values in order to be trusted.

S. Schulz and all. talks about reputation as a starting point for trust, but also about security systems, focusing on the exchange of knowledge [24]. Jörgen Skågeby discusses about the need to foresee the possibility of conflicts when trying to offer services to modern cultures. He also sees that sociotechnical capital coming from the introduction of technology might generate trust, but also brings social issues for users [25].

Purpose perspires through all content, all conversations and all elements that are part of the community, Hoadley observes [11]. A joint purpose is what gives unity to the community and, fromt his point of view, radical changes in the community's way of structuring or organizing itself can be perceived as a threat. This would change the original joint purpose and, thus, modify the community as it stands.

Having such a tensionate relation with an element which looks to drive the community and support its activity is impossible, since it leaves trust away.

**Influences that the parkour community has on the design structure**

During one of the user studies, a leader of a parkour group mentioned that the group was considering the possibility of not supporting the development of the application anymore in case the direction of the academy structure would be pursued. (subject 3B Robin) That is a complete rejection of the function already from development stage. The release of the app with this function could lead to the rejection of the entire application. Since rejection was unianimous in the research stage, corresponding responses can be expected also after the commercial release of the app.

The issue with this matter is that even if the academy function would be a visionary one which can support the activity as it will look like at a certain point in the future, the rejection at this stage completely excludes it from the entire evolution process of the activity on a long term. This means that the application will not be part of the evolution and fail in bringing any support for the activities.

Designing for the community means, in this case, a thorough understanding of what it stands for at this moment and not forcing it to make a jump to a new structure at an earlier moment than it is prepared to do.

Participatory design was an essential part of the redesign process. Previous experience had proved that distance from the community leads to discrepancies in serving the needs of the users. Disconsidering the principles that the users base their activity on proved to be impossible in the case of a community that identifies itself exactly through this specific set of values and characteristics.

The power of the parkour community stands in the fact that the members are consequent in applying the group's values. Variations of these values or mistaken propagation of them could lead to variations between groups and loss of unanimity. It is therefore more important for such a small and easily alterable community to preserve the form in which its values are prorogated.

A design of a new technology is therefore impossible without the participation of the community's members at all steps.

**Influences that the mobile application has on the community**

Jörgen Skågeby calls the changes that technology brings to the way human activities take place “gifting”. It’s the action of offering and giving “a gift” that can have strong implications in the way that the community is organized and acts [25]. This takes place whether expected or not when technology becomes part of any process. It offers something and what is offered contaminates the activity, may it be positive or not.

Lorenzo details not only how design shapes communities, but also the responsibility that design has in the reshaping process. Design should have an active role and not just passively echo identified elements [17]. This leads to an obvious modification and redesign of the community’s architecture, which is seen more as a responsibility rather than a contamination. What Lozano [17] also underlines is that the influences that design has on communities should be well documented and considerate of progress potential.

Etienne Wegner points out the creative dimension of the act of community, since it offers the space where members can commonly discover solutions for existing problems and tensions [28]. The community provides with the space for solving these issues, but is not sufficient for making tensions disappear. This takes place through interaction, sharing of information and nurturing a sense of togetherness. The parkour community also went through all these steps during its development in the online environment and adding the mobile dimension to this development can only add another environment to their space of activities and development.

As the studies showed, the possesion of a mobile application brought new possibilities and new ways in whch training takes place. It added spontaneity and increased potential for training occasions through the syncing function, facilitated communication and brought inspiration through the spots and video gallery. The application even lead to the invention of a game, which changed trianing behavior in the context of using the app. The modifications that the use of the mobile application could bring during training were obvious.

Used at a large scale, the modifications in the way parkour is practiced would propagate very fast within the community. Some parkour practitioners expressed their belief that their interest for using the application would be directly proportional to the number of other practitioners that start using it.

Schultz and all. Says that communities evolve information policies that define what kind of information is allowed for dissemination, to whom, and under which circumstances [24]. An open enviroment such as a mobile application presents a high level of risk for “gifting”, since there is no filter present to state what is conforming to parkour values and not. This riks also leads to diminished trust in the enviroment offered by the application, at least from the point of view of the more experienced practitioners that now see their role as one of protectors and messangers of parkour values.

### Reciprocity

Designing should also keep into account evolution of the community. It is also what Etienne Wegner explains, when saying that the life of a community looks more like a journey. The needs present at the beginning of the community's life will transform and evolve in response to the increase of the members' number or of the practice's evolution [28].

Such evolutions have to be kept into account when designing for communities. Only the introduction of a new media environment for supporting the community's activities is one additional step in the life of communities. This means that the design should be proactive and understand the evolution of the practice while being considerate for the current structure of the community. A step too big made at once will make it difficult for members to identify with the current image that they understand for the community.

## DISCUSSION

As discussed in the initial methods section, the design project was deeply rooted in the practices of participatory design. Through the close collaboration with a group of stakeholders from start, the identified problem with online video material, and the articulated purpose to contribute to a safe way to train Parkour, its original approach lies close to participatory action research [21]. It should also be noted that the community's general reluctance towards competition was brought up several times during the initial design phase and used to rule out more game-like design suggestions. Hence, the design approach also took community values into account from start, as advocated by Cockton [5]. In this section, the highlight is set on what was believed to be the main reasons why problems still occurred when applying well-established methods, and point towards some keys to the redesign (eventually) led to a successful point.

### A dispersed and changing community

As emphasised by Ozanne and Saatcioglu [21], participatory design is typically done in close interaction with a local and identified community. But the Parkour community is dispersed and heterogeneous. Hence, a major issue for the project related to grasping the values and practices of the community *as a community.* Here, ethnographic work on Parkour runners and similar communities helped to establish an understanding of the community as such, and in particular, understanding why the valuation of play was so important for the Traceurs. By engaging with local Parkour groups, we could also see to what extent 'the theory matched the reality'. The local groups that we brought in had a slightly different way of practicing Parkour than previous studies have shown (in particular through training more indoors), but still largely upheld the same values.

**Designing for play as a community value**

Although design for experience is today an acknowledged value [10], designing for play has been less explored. Designing for play differs from designing for a game, a sport, or any other goal-oriented activity, in that the goals and rules of the activity are subordinate to the act of having fun together. *Designing for play requires open design solutions.* By introducing technology into an existing play activity, we run the risk of constraining it through rigid structures and instructions - as our initial design did through its fixed training sequence and rigid instructions on how to perform moves. At the same time, technology can support a play community in inventing new forms of play - as our testers did by using the meetup functionality for a chase game. We were particularly pleased to see that our original goal of designing a street game around Parkour was, in fact, realised. However, rather than us implementing it in code, it was created by the users, enabled by an open design.

**Designing for conflicting values**

In the Parkour community, the play value was contested by the strife towards making Parkour a *sport*. While our test participants expressed a strong resistance to hierarchies, gradings, and competitions, the community still upheld informal hierarchies and was getting more structured, among other things by the appearance of competitions. The individual traceurs will often have a mixed view of Parkour as both play and sport.

In our design, we needed to strike a balance between the requirement on openness (so support a variety of play practices) and the need for support for safe training. *Although this may not be desirable for an ethnographer, a designer can benefit by 'going native'.* By training and socialising with traceurs, our interaction designer internalized the complexity of the value conflict, allowing her to find a design solution that struck a balance between the two requirements.

**Conclusions**

In designing for the (Swedish) Parkour community, we ran into several issues related to value-centred and user-participatory design. The major issues related to the fact that the community is not local, but a widespread and heterogeneous group of people kept together through their common interest in street acrobatics and their online interaction. In order to design for the community rather than just for the individual project participants, we compared our own experience of the community with previous ethnographic studies of Parkour. By doing so, we achieved a deeper understanding of the value system embedded in the practice as well as why this system is important.

User studies have showed that a strong influence comes from two directions when developing a mobile application for small groups, such as those of parkour practitioners. The small groups are dedicated to the core values that make them part of a larger community and accept the design once it

respects this. On the other hand, the mobile application becomes an artificial support for their activities, which can even modify their structure.

In the case of Traveur, the design was strongly influenced by the feedback that was received from the community's members. Statements were quite precise and unanimously pointed out issues that came into conflict with the community's values.

The small size of parkour groups makes a rather dispersed community, with high chances of having their own development direction altered by influences. Because of this, parkour members and especially leaders are extremely demanding towards keeping the core values of the activity intact.

From this point of view, design testing and research have proved that the psychological dimension and hierarchy structures of parkour go passed those of already researched activities, such as sports. From these particularities developed the need for a focused design. Maintaining an identity for parkour as an activity and not altering the current state of the community is extremely important for small groups.

The lack of input from parkour groups and scarce testing led in the first step to a design that later proved to be rejected by future users. Introducing user testing as early as possible in the design process provides long-term benefits, especially when it is the case of a dispersed community that has high focus on keeping its activity and values intact.

The success of not contaminating the activity through the introduction of new technology is relative. The contamination of a smartphone application proved to be accepted by the members as long as it could be used to support current values and strengthen group connections. That result could not have been achieved without introducing user testing early in the design process and involving users through additional testing at every redesign step.

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