VIRTUAL HEROES INCOMING

When Losing Oneself in the Internet Becomes Reasonable

An Economic Approach on Virtual Lives

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by

Lukas Seger

Supervisors

Prof. Dr. Hannu Laurila

Prof. Dr. Bernard Dafflon

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The relevance of the internet increased significantly in the last decade. Besides all technical achievements, also social structures are influenced by the technical progress and a considerable part of human interaction moved to the web. Some people live even more in the virtual space than in reality.

What are the reasons to do so? By adopting emotions in economic theory it becomes possible to explain human behaviour motivated by non monetary reasons. The aim of this thesis is to reveal the costs and benefits of virtual lives. It will be shown under which conditions living in the internet might become a considerable alternative to "real" life.

The intention is to add a new point of view to an ongoing discussion about the internet, social differences and redistribution. It is not the goal to present a complete theory about the impacts of the internet on human interaction.
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1 Introduction: An alternative Approach on Virtual Lives

What are virtual lives? The journal Gamezapp (2008) estimates that 200 million people are playing computer games in the internet worldwide. Together with social platforms as YouTube, facebook, forums, chats and a lot of other content a considerable part of social interaction moved into virtual space. This thesis has the aim to offer an alternative view on the life in the internet. The focus is set on persons who spend a big part of their time in the internet and live more in virtual space than in the real one. Most interactions and contacts to fellow man are switched to the internet.

In standard discussion about people spending much time online, experts often argue in the dimension of addiction. Others denote these persons as “nerds”. Since the discussion is going on, looking for the reasons is central. For some it is a hobby, others have a job in the web. Even sport leagues for computer gaming exist. But these reasons reduce the possibilities given through the internet to an inferior size. Could it also be rational in other dimensions to live in the internet? It can be shown by an economic analysis of the issue that basic emotional, strategic and also distributional reasons may be much more relevant than the commonly discussed ones. Three main questions lead through the thesis. First, under which circumstances might a life in the internet be reasonable? As in all other discussions first reasons and reason of joining a virtual life are investigated. Secondly, how do costs and benefits change by joining the virtual space? What are the consequences of leaving reality? How may incentives and behaviour alter? With this approach results are discovered which might be able to explain very central observations. Finally, what are the impacts for society? Which externalities emerge? With which costs and benefits is a government confronted? Which are the policy implications? The goal of this thesis is not to explain living in the internet fully, neither to contradict to medicinal and psychological methods and results. The aim is rather to enrich the ongoing discussion about virtual lives by new insights, drawn out of an alternative economic approach.

The thesis is divided in three chapters. At the beginning emotions are included in the economic framework of thinking. A lot of human well-being and also welfare is not just dependent from monetary terms. Often emotional, not economic reasonable
impulses influence human behaviour. Different approaches such as Robert Frank’s and Jon Elster’s result in a very strong combination which is able to enlarge the expressiveness of economic theory by emotions. Emotional incentives are explained by basic economic vocabulary. This combination of rationality and emotions helps to discover very fundamental reasons for joining a virtual life as well as to explain basically human behaviour where classical economics usually isn’t able to give a proper answer, for example in a lot of distributional issues. Chapter 2 provides the theoretical basis for the thesis. The grasp and possibilities of these approaches are also very useful for far more issues.

Chapter 3 contains the economic approach on virtual lives. A very restrictive assumption has to be done: A person might live in the internet or in reality, but not in both places at the same time. This assumption helps to make a cost-benefit analysis of different alternatives and also leads to the three key reasons to join a virtual life: status, reputation and talents. Finally, with the understanding of emotions in economic theory, cost caused by a virtual life can be faced to its benefits. It will be shown that there might be a big part of reason in living in the internet. But also rather problematic issues are mentioned such as a return into real life as well loosing oneself in the internet. The analysis is divided in different perspectives: Join a virtual live, switch between different virtual lives and finally return to reality. The implication is two-sided. First surely a person may be confronted with very high costs urged by the decision to live in the internet. But also benefits out of such an experience may help in reality. This chapter concerns the cost and benefits for a single person by analysing reasons and incentives in particular situations. Chapter 3 is the theoretical part based on the framework created in chapter 2.

Chapter 4 creates the intersection from theory to reality. First a sample of persons who live a virtual life or at least a part of it will be presented. The reasons and statements show that for a lot of people living in the internet is very reasonable – also in economic terms. Secondly the very restrictive key assumption is discussed. How does the expressiveness change when the assumption is loosened? Thirdly, the model is faced to recommendations of psychology. A distinction between losing oneself in drugs, dreamlands and the internet will be drawn. In the last two sections the issue is analysed by a public economic point of view. What are the externalities of virtual lives for a society? When does policy should intervene and regulate? What
are the rather hidden, nevertheless very important benefits of virtual lives for a society as whole? Because the web is a very quickly changing world, an outlook about how the internet might look in future and what the implications of the model are will accompany the last chapter.

The goal is to introduce the reason of virtual lives into the public discussion. The strength of this approach is that a clear analysis of emotions, cost and benefits can be done and explain behaviour as well as help to make finally policy implications. It can be pointed out exactly where the problems related to virtual lives are and does not as generally done mix up the different issues. Basically it is my aim to not contradict too much to expert opinions, but with the impacts of this essay I just have to. My central concern is to face the reason and the possibilities of virtual lives to the well known negative externalities.
2 Emotions in Economic Theory

This chapter shows how emotions can be included in the economic framework. Emotions are required to analyse how virtual lives emerge, exist and end. These approaches are not only limited on this issue, they may also be very helpful in the analysis of far more problems. Chapter two presents three different and independent ways to deal with emotions. The questions to answer are the following: What are emotions? Do analogies to known terms as costs and benefits exist? Do emotions affect strategies and outcomes in known games? What is the role of reputation? How are distributional issues influenced by emotions and by the assumption that people differ in attributes or talents?

Section 2.1 is an introduction to the chapter and also shows what is considered by rationality as counterpart of emotions. Part 2.2 defines emotions in the economic framework and looks for analogies in economics as costs and benefits. In section 2.3 it will be shown by the commitment model how strategies may be affected and supported by emotions. And finally, section 2.4 will discuss why persons with different attributes and talents care more about distributional questions than optimising the output by introducing status and its consequences. The main implications are summarised in 2.5. A more detailed introduction follows at the end of section 2.1. Again, the different sections in chapter 2 cover independent problems with just few intersections. They are required for the chosen way to discuss virtual lives. Because the issues are not standard in economic theory they are covered in a broader range than finally used.

Chapter 2 is a summary of existing approaches and so far independent of chapters 3 and 4.

2.1 Why Emotions in Economic Theory?

Why and how introduce emotions in economic theory? This question is answered in different ways over chapter 2. This chapter discusses the economic approaches needed in the analysis of virtual lives. It provides the tools. An application on virtual lives follows in chapters 3 and 4.
Section 2.1 is an introduction to emotions in economic theory. Rational behaviour will be defined as counterpart to an emotional one.

One of the main accounts of economics is optimising social welfare in a world with scarce resources. This process is done often by maximising efficiency in measurable terms as money. As we know from daily life, our welfare is not just dependent from quantifiable or rational elements. Feeling bad is possible not just because we don’t have enough money. Other sources of human satisfaction than money exist. Pleasure can be gathered in a lot of different ways. Often emotions are involved in some way. It is very helpful to understand emotions in an economic framework. In situations with rare or limited resources emotions take a very efficient role in welfare optimising. They may serve as substitution or compensation for a good. How emotions do affect welfare and well-being is central over the whole discussion.

Understanding the role of emotions in an economic framework starts with the question what is reason or rationality. Rationality will help to define emotional acting and show the differences to standard assumptions. What is the difference between an emotional decision and rational one?

Persons have different definitions of rationality or about what’s reasonable. This is depending on current preferences. Even in science a lot of definitions about rationality exist. We’ll focus on one, the standard view of rational choice theory:

Concerning Elster (1996) three basic conditions make a decision and its following action rational. First, a person must realise his desires or preferences placed in his own beliefs. The beliefs include the expected outcome of the action combined with ones preferences. Rational action optimises the outcome under condition of given preferences. Secondly, the beliefs themselves have to be optimal. In the creation process of beliefs the available information about the environment and oneself should be used independently from each other, so they are not directly influenced by the own desires and experiences as the blocked arrow illustrates. Additional mistakes in the information process have to be avoided as a kind of assumed perfect information. Thirdly, the resources invested in gathering information should be optimal (or better minimal) in relation to the importance of the decision to the actor.
This is the way a rational person in an economic model usually should make decisions. But a lot of decisions are motivated directly by our desires. They are not rationally made as mentioned in the definition before. These decisions and especially the resulting actions often are motivated by emotions and experiences.

Rational decisions are characterised by independence between desires and beliefs. Emotional decisions are often based directly on beliefs. But what is the result of this difference? How does the action and the according outcome with one or the other decision change? This is an ongoing discussion in a broad range of different sciences. There are two possible views about how emotions may influence decisions. First, emotions are sand in the machinery of rationality. They disturb an efficient decision process and lead to an inferior outcome. This sounds plausible as everyone experienced in daily life. For example, one does not like the agent in a car company and buys the same car in another company at a higher price. Disliking finally causes higher costs. Second point of view is that emotions may help making superior decisions than simple rational thinking as argued by Frank (1988). A very important observation about the relation between emotions and rationality is following.

“Recently, Damasio (1994) offers a book-length discussion of this view, based on work with patients with brain lesions. Although he speculates that “Reduction in emotion may constitute an [...] important source of irrational behaviour” (p. 53), his work supports the conclusion that “The powers of reason and the experience of emotion decline together” (p. 54). In other words, he proofs correlation – brain-lesioned patients are both emotionally flat and unable to make decisions – but not causation. [...] It is indeed true that often what matters is to make some decision rather than any particular decision. If
Damiaso’s conjecture is true, the emotions do make a contribution to rationality.” Elster (1996), p. 1393

However, all authors writing about emotions and economic theory use rationality or reason as a framework to place emotions in. Their aim is to include the emotions in the rational action model and not to develop a new one. The term rational will be used as proposed by rational choice theory.

Existing economic models about emotions combine rationality and emotions. So emotions will be usable in standard economic analyses. Chapter 2 will focus on two approaches. The first approach (2.2) was created by Jon Elster. With knowledge received by psychology and evolutionary biology he models up emotions with a certain valence. Finally emotions are able to decrease or increase welfare or in other words to cause costs and spend benefits to a person. It is a very intuitive way to analyse emotions as economist. But lot of finesse is in. Emotion seeking behaviour becomes suddenly rational. Emotions are the target of rational actions caused by an expected benefit. Emotions are modelled as target of actions.

The second approach (2.3) was developed by Robert Frank. He discusses emotions as helpful support for strategies. This part will be an application of game theory. The essence of this section is the commitment model. Emotions help to commit on certain strategies which a rational person without emotions couldn’t play that efficient. The commitment model from Frank demonstrates why emotions may lead to superior outcomes. Second big impact is that emotions are includable in big parts in the economic models about human behaviour and rationality. With these methods the value and importance of a good reputation can finally be evaluated.

After the placement of emotions in two different ways economic theory, section 2.4 contains the most important feature for the thesis: Human quest for status. This theory was also developed by Robert Frank. Status feelings contain a very mean element, because they are able to waste a lot of utility or benefits and therefore resources. The theory is created to explain phenomena traditional economic approaches failed to. The huge strength of the status model is the impact on distributional issues. Combined with emotions this theory is very powerful in explaining human behaviour related to virtual life because of market failures and distributional conflicts.
This chapter discusses the models about emotion in economic theory used by the analysis of virtual lives in chapter 3. The aim is to combine the three different approaches about emotions for economic theory and make them helpful in an economic analysis. So phenomena which standard economic theory is not able to explain are discussed in a slightly altered way.\(^1\)

### 2.2 Costs and Benefits of Emotions

Intuitively emotions seem to be something in conflict with rationality. How can emotions be discussed and understood with economic terms? The way to answer this question starts with another one: What are emotions? In this section emotions will be treated as target of our action, based on Elster (1998).

First, a classification and characterisation will help to get an overview about existing emotions and an understanding of the range of the word emotion. Secondly emotions will be included in a cost-benefit model. The discussion will go on by asking if it is possible to plan our emotions. Is it possible to optimise emotional benefits under certain (budget) restrictions? Finally, does a market for emotions exist? These are very general questions and this essay does not answer them completely. Limits of emotions in economic theory will be shown. The most important tool of this section will be the cost-benefit model of emotions.

Which emotions do exist? How may they be classified? The following list is not complete but represents a good sample.

1. Social emotions: Anger, hatred, guilt, shame, pride, admiration or liking. They are related to another person or a group.

2. Counterfactual emotions about things that might have happen, but didn’t: regret, rejoicing, disappointment or elation.

3. Emotions about things that may happen as fear or hope.

\(^1\) The discussion in chapter 2 is not yet used on virtual lives. It will remain purely theoretical. The application follows in chapter 3 and 4.
4. Emotions generated by good or bad things happened to the actor: joy, grief.

5. Emotions triggered by thoughts of possessions of others: envy, malice, indignation and jealousy.

6. And finally, some emotions which don’t belong to a group as contempt, disgust or romantic love or are not clearly emotions as: boredom, sexual desire, enjoyment, worry, frustration, interest and surprise.

The list is quite large, and every reader was surely already influenced by several or probably all of these emotions. In other words one might say that welfare or well-being was or at least could have been influenced by them. In science there is quite a large consensus about these emotions existing, but not about what makes them to emotions. Emotions differ from culture to culture and time to time. Romantic love did not exist in Europe until 11th century or the people in classical Greece did not know guilt. In some African cultures, envy is a main element of social interaction related to property as Signer (2002) investigated. It ends in witchcraft, because envious family members curse the successful ones, and a strong belief in magic still exists. Whether emotions are universal or very culture specific is an ongoing discussion. Elster (1998) suggests the unproved intermediate position that physiological and social expressions are more or less the same in all societies. But in some, depending on time and place, a lack of cognitive label may exist for them as mentioned above.

After this short list to find a basis to discuss on, we are able to answer the first question: What are emotions? In science, answers are still discussed and there is no general agreement about it. Elster (1998) uses six characteristics to define what makes an emotion an emotion, which were already recognized by Aristotle and still remain central in current discussions: cognitive antecedents, intentional objects, physiological arousal, physiological expressions, action tendencies and valence.

1. Cognitive antecedents: Emotions are triggered by beliefs. Contrariwise rationality is not triggered by beliefs as showed in section 2.1. This is also the main difference from emotions to visceral feelings as hunger, pain or drowsiness which are urged by sensorial signals.
2. Intentional objects: They are about something, an object or a person. You feel anger about someone or envy about something in possession of another person. Intentional objects are often very close to the antecedent of the emotion, so formed by beliefs.

3. Physiological arousal: The sources of emotional actions or states are hormonal changes in the autonomic nervous system. Emotions are accompanied by visceral factors as hot flashes, sinking feelings, burns, stabs, or pangs.

4. Physiological expressions are the easiest features to observe caused by emotions. A person laughs or cries, is frowning, blushing or baring his teeth. Also the bodily posture, voice and mimicry are physiological expressions.

5. Valence means that emotions can be set on a pleasure-pain scale with a point zero for emotional indifference. Usually emotions with high physiological arousal have a high valence – but not necessarily. Love has a very positive valence while and shame a negative one. But boredom can have a very negative valence and low arousal while embarrassment has high arousal but a low valence.

6. Action tendencies are last, but one of the most important features of emotions. One emotion may have one or more action tendencies. Shame has the tendency to hide or disappear, fear to fight or flight. There are also emotions which have none as pride or regret. Actions tendencies urge a quick action or modify the behaviour of the agent so that it is not anymore rational. They are also often influenced by social norms.

After this characterisation of emotions the question is how to include them into the economic model of rational action. The first part of this chapter showed, what emotions are, which features they contain and how one is able to observe them. The valence especially is central to make emotions usable in an economic way and so it is important for this essay. Why is it like this?

While expression or arousal is probably more important for psychology, the concept of the valence is very close to welfare. So a negative valence of an emotion influences the welfare of a person. For example the feeling of shame after showing a strong feeling of envy on the neighbour’s new and fast sport coupe is a very
unpleasant feeling. On the other hand, a person who is in love profits from a very high valence. As mentioned in the list before, valence is linked with physiological arousal. For the further essay it will be sufficient to focus on the valence and use arousal as a factor which goes hand in hand with valence. It is possible that physiological arousal enforces or decreases the strength of an emotion. But the final impact related to the essay remains marginal, because the issue is about emotions which have a valence-arousal relation which goes hand in hand. As arousal a lot of features should be included in the model. But finally a simple model which explains as much as possible should be preferred.

Let us assume that valence goes hand in hand with welfare. A positive valence of an emotion increases welfare as a bad one bates it. Elster (1998) suggests a cost-benefit model. Positive valence produces benefits and negative valence costs. So a combination of emotions and basic economic theory in terms of costs and benefits is simply usable. The basic impact for economic theory is following: A rational person tries to optimise utility, this means avoid costs and receive benefits out of emotions.

This implication opens a new question: How is it possible to optimise the utility out of emotions? Is it even possible, to plan receiving benefits out of emotions?

The third part of this section – after introducing emotions in an economic context first and the cost-benefit model second – tries to answer the question if it is possible to choose an emotion. Or in other words, are we able to plan our emotional benefits as an income?

Answering the third question needs to split up emotions in occurent emotions and emotional dispositions. A second distinction is given by the person who chooses the emotion: the specific person or someone else. Four possible combinations emerge. They will be analysed separately.

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2 Shame has a very important function in societies with norms. Social norms generally punish people violating them by triggering shame. In the example of envy our norms say that it is a very mean thing. Shame is one tool of norms to punish persons who violate them.
Choosing an occurent Emotion by oneself is the first object of interest. Occurent emotions are “emotions” as discussed already. Elster (1998, p. 54) writes about choosing a positive emotion as follows: “It is generally agreed that emotions cannot be chosen in this sense. Emotions are passively undergone (cp. The synonymous term “passion”) rather than actively chosen.”

While it is not possible to choose directly an emotion with positive valence, a person may avoid having emotions with a negative one through self-control. For the function of self-control two points related to the strength of the emotion are essential: the point of no return and the point of detection. If a person is in love, perhaps he first does not recognise it. The same is possible with a negative emotion. For example by shouting “I’m not angry” a person is probably already very angry but did not recognise it. In this case the point of no return is already passed and the point of the earliest detection is located on a much stronger point of the emotion. Self-control is not anymore possible. To have the possibility to influence the own emotions the point of detection must occur before the point of no return does. Controlling emotions directly is quite difficult.
Indirectly choosing to have a positive emotion is easier or more probably. Consider for example an ice hockey game. The fan of the winning team has a lot of pleasure. He chooses or has chosen a favourable situation namely to watch the game. Elster (1998, p. 54) mentions: “Generating occasions for pleasant emotions is a major part of people’s lives.”

Avoid unfavourable occasions also is daily business. A famous example is the encounter with a beggar. When a person passes the beggar, he may feel superior because he’s got more money or he feels guilt, because he’s got money and the beggar a really bad life. While few people feel superior because they are richer than a beggar more interesting seems the guilt. Avoiding the negative emotion is done by avoiding the street where the beggar sits. A similar observation is that high-income individuals stay away from low-income persons of the opposite sex because they might fall in love. The consequence would be a decrease of income. The feeling of love itself has a positive valence and produces a benefit. But the costs generated by the lack of income might be higher. Combinations between monetary terms and emotions are possible, at least in an ordinal scale.

So the direct path of choosing emotions is often difficult or even impossible. With the indirect way a person looks for good situations or tries to avoid bad ones. In an indirect way we may control our emotions. Laws as the point of no return and detection point show difficulties of controlling own emotions directly.

The second case of choosing emotions is to choose emotional disposition by oneself or others: What’s an emotional disposition? Best example is given by Elster (1998, p. 53) himself:
“In theory, a person might be irascible but never angry, if others, knowing his disposition, avoid provoking him. In practice, of course, he would have to show actual anger from time to time to maintain a reputation for being irascible. The distinction is nevertheless fundamental. The experience of shame, for instance, is intensely unpleasant. No one would ever take steps to seek it out. Yet a person might try to develop a disposition to feel shame, or more plausibly, to inculcate in his children, the goal being the avoidance of shame feelings by avoiding the occasions or abstaining from the actions that might cause it.”

The quotation already said a lot about emotional dispositions, what they are and how their mechanisms work. Inducing an emotional disposition will be in focus in the following section 2.3 about the strategic role of emotions. Changing or creating a disposition chosen by the actor himself is nowadays very well known as psychotherapy. People are often afraid of the action tendencies and physiological expressions of their emotions which are not under own control. A training to control emotional reactions out of dispositions is required. This is the second way how one may influence benefits or costs out of emotions besides looking for good situations. A lot of different approaches and theories exist about this complex, more psychological subject. For the essay this summary version is sufficient.

“Occurent emotions chosen by others” is the last and most difficult case because nothing is very clear and no consensus exists about. As examples may serve oratory, so manipulate the beliefs of others by rhetoric. A second example is the practice of “shaming” which serves as alternative to incarceration. It is supposed to alter the environment so that the offender finds himself confronted with costs in it.

Are we finally able to plan our emotions or plan to receive benefits and avoid costs? The answer is short: Generally no. But there are several possibilities, especially the indirect way by avoiding or looking for certain situations or occasions, which exist. Moreover the emotional disposition can be influenced by psychotherapy, but generally it remains difficult. As well as the person a third one may influence the emotions. Choosing a good situation is the most promising possibility to control emotional cost and benefits.
All in all, it is not possible to optimise emotional benefits in classic economic way. This means optimise valence or benefits under conditions as budget restriction is not possible because emotions can just rarely be directly influenced and we don’t know the restrictions. Nevertheless emotions cause benefits and costs. Emotion-seeking behaviour remains an important incentive of human acting. But we don’t know economic terms of emotions as budget restriction or optimum. For normal goods with a known price, a very clear restriction is given through available money and optimisation is possible.

One answer to the missing budget restriction might deliver the aspiration level theory from happiness research summarised by Frei and Stutzer (2002, p. 414). By generating an aspiration level about an expected and wanted future situation of oneself, the happiness is dependent on the achievement of this goal. A person becomes happy and satisfied by achieving the wanted aspiration level. But for more or new satisfaction and emotional benefits a new and higher aspiration level has to be defined and achieved. This scheme also fit for emotions. Feeling happy all day long becomes also a kind of boring, what implicates a neutral valence and so no further benefits, after a certain amount of time.3

Again, are we able to control our emotions? Directly we are not, but if a person makes a very good so called character planning, has got a relative good emotional disposition and chooses good situations to be in it is possible. But emotions can’t usually be controlled completely.

After illustrating and scrutinising budget restrictions, costs and benefits of emotions a last question remains: Is there a market for emotions existing? Or better, is the market model suitable for emotional costs and benefits? Elster (1996, p. 1387) writes “no” because this utility is derived out of encounters with other persons. “Can’t buy me love.” I think this general “no” is wrong. A more imaginative suggestion was developed by Gary Becker (in: Frank 1988, p. 186-191) about relationship markets. When a woman asks, why she never finds a man, the answer could be the following:

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3 This could be a reason, why superstars are not really much happier than common people and might end finally in a swamp full of drugs, because this is the only way how they can reach their very high emotional aspiration level anymore. Or even worse, they cannot set anymore a new level, because they posses already all material desires.
You are on a scale from one (very ugly and stupid) to ten (most beautiful girl of the world) a six. In this scale all the important talents are included, but also income and social status. You as six are looking for eights or nines instead sixes. But with the efficiency of markets demand and supply play together. You should meet another six. It is not love that is directly dealt with but at least encounters or situations to generate it. Nobody did yet make clear statements on markets of emotions. Emotions themselves are probably not traded on markets, but the appropriate encounters or situations can be. A market mechanism could work. Markets for situations which produce emotions exist. Consider for example sport games, touching movies, speed dating, advertise of any kind and so on.

The conclusion of this section is the cost-benefit model for emotions. It is a first approach to deal with emotions in an economic way. It is very consistent, very simple and based on quite realistic assumptions. Making more precise statements about emotions in economic theory is rather difficult as shown in the parts about emotional planning, optimising emotional benefits and markets for emotions. People try to receive emotional benefits and avoid emotional cost. This cost-benefit approach is quite realistic and will be used very often in further parts of the thesis.

2.3 About the Strategic Role of Emotions and Reputation

In the past chapter emotions were presented in a way how economists may interpret them. Which emotions do exist? What are their main characteristics? May they be influenced by oneself or another person? Do analogies exist to known terms as costs or benefits? The emotions were treated as target of action.

This second approach discusses the supporting role of emotions for strategies. This section is based on Robert Franks *Passion within Reason* (1988). Already the title reveals the claim of Frank to upgrade the rational action theory, not to contradict it. This way shows how emotions may affect our lives in a strategic way. Emotions are not anymore designed as target of actions; they rather are supporters for strategies or even a part of the action. Altruism, Love, Revenge or Fairness are couple of examples. They cause rather an action tendency than target of action. As main tool to explain the strategic role of emotions Frank created the commitment model.
After an introduction example with the help of the prisoner’s dilemma the commitment model and its solutions will be presented. A small excursion about the very famous tit for tat strategy will close the first part. Secondly the mechanics of reputation will be analysed. How can a good or a bad reputation influence outcome? What are the benefits of a good reputation and the cost of a bad one? Goal of this chapter is to show that emotional acting may be very reasonable, especially in terms of outcome or benefits within economic game theory.

As introduction consider a mafia clan killing a member of another one. This very famous issue of history, books and movies is called vendetta, a very cruel way of vengeance and revenge. How can this behaviour be rational? It is not reasonable at all to be involved in a bloody war. Emotions are not directly the strategy itself, but mourning, hate and feelings of revenge lead to a vendetta strategy. Franks has another point of view on this issue.4

In a situation before killing starts, the vendetta serves as commitment. A family which commits on vendetta automatically deletes one alternative from possible strategies to play in case of a murder: To forgive. Everyone knows that the clan will seek revenge for killed family members. “If you kill one from us, we kill one (or more) from your family. We won’t forgive it.” The clan commits on revenge. And as history shows: It is a very credible commitment. Another family thinks twice about starting aggressions against this clan. The commitment on revenge triggered by a first kill which urges emotions as anger, hate and mourning, is finally not irrational at all because it serves as a protection. Nobody has to be hurt as long the commitment stands and is strong enough. It is strong enough as long its credibility is given. And the credibility’s value is generated by emotional support. The aggressor’s question is

4 As evolution biologists mentioned, dominant or more economic optimal action strategies survive while others disappear. As a example fear of a deadly monster may serve. When one is afraid of the threat, run away in fear immediately, fight or think and stay are the alternatives. Let’s assume that thinking what to do or fighting is definitely the wrong choice and causes death because the monster will slay the person. All survivors were pushed by fear to run away before. So this strategy survives with the person. The persons who thought about what to do and fought, and did not run away are dead. And so their strategies are gone with them: “thinking” or “fighting” in this particular situation. They cannot teach it anymore. This is a very simple explanation of how action strategies or emotions survive in an evolution biological sight. But it shows at least the basic idea of it. Frank (1988)
finally: Do the others seek revenge or not? If not, the commitment is not credible. If yes is the answer, are the benefits of a kill higher than the costs? The problem starts obviously with beginning murders. This means that either the commitment was not credible and strong enough or that the aggressor’s cost were anyway lower than the benefits from a murder.

As long as no kills occur the commitment on vendetta works. In most situations it isn’t efficient to kill someone since the commitment on revenge is given. This is just one example for the commitment model. Frank’s argumentation uses emotions generally as support for strategies which a purely rational person could not play because of missing possibilities to commit. Emotions may help to commit on a strategy much more credibly. But they don’t have to be involved necessarily to play it.\(^5\) In a second step, the analysis of the commitment issue in a more formal way will be done by a very famous model of economic game theory: the prisoner’s dilemma out of Frank (1988, p. 29-35).

\(^5\) *Passion within Reason* takes account to further important questions of the commitment model. When is a commitment credible? Why may a person behave absolutely selfless? Where are the limits of the commitment model? This would be far too much for this essay. A summary has to suffice.
everyone will be punished with one year in prison for a lesser crime. As they are held in separate cells communication between each other is not possible. Each prisoner is told that if one confesses while the other remains silent, he’s set free and his silent colleague will go to prison for 20 years. If both do confess they will get an intermediate punishment and have to go to jail for 5 years both.

The dominant strategy in the prisoner’s dilemma is to confess. If Y confesses, X receives by confessing a punishment of 5 years instead of 20 by remaining silent. When Y remains silent X is set free under condition of confessing. Otherwise X would be put in jail for one year. A rational person in a one shot prisoner’s dilemma always confesses because his outcome is higher no matter how Y decides. The problem of the two prisoners is not necessarily that they aren’t able to speak to each other. It is even more a lack of trust. Why?

If they were able to deliberate the problem would still remain. Even if they agree to remain silent, for both it is still more rational to confess. A rational person in a one-shot prisoner’s dilemma breaks up with his promise to remain silent. The players have to find a way for a credible commitment on remaining silent. In a one shot game this credible commitment could be given by emotions. Imagine that X and Y are in love. Then they probably won’t betray each other by confessing. Or if they are in the same mafia clan a mixture between guilt, honour and fear of the family could push them to remain silent. Emotions may support in this situation the strategy to remain silent by helping commit credibly. Pure rational players will always confess, because of a lack of possibility to commit. Their “emotional” pendants are able to cooperate by remaining silent. Their emotions could help them to commit credibly on remaining silent or more generally cooperate. While the result of a one-shot game is verified the situation alters in a repeated dilemma.6

“In one early study, psychologists Anatol Rapoport and Albert Chammah investigated how people actually behave when confronted with repeated instance of the prisoner’s dilemma. Their experiments, like hundreds of others that have followed, gave pairs of players two choices: “cooperate” or “defect.” The payoffs were small sums of money

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6 Frank follows the question how to commit credibly over the entire book and own chapters. There are different ways to show emotions and generate trust as for example mimicry in our faces or reputation. Reputation will be subject below.
rather than years in jail, but the structure of their game was otherwise identical to the prisoner's dilemma. […]

As before, the dominant strategy for a single play of the game is to defect. A higher payoff is achieved by defecting, no matter what the other player does. As in the original prisoner’s dilemma, however, the players each do better when both cooperate than when both defect.

The central discovery by Rapoport and Chammah was that people show strong tendency to cooperate when they play repeatedly with the same partner.” Frank (1988, p. 30)

<table>
<thead>
<tr>
<th>PLAYER X</th>
<th>DEFECT</th>
<th>COOPERATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFECT</td>
<td>2 c for each</td>
<td>6 c for X, 0 for Y</td>
</tr>
<tr>
<td>COOPERATE</td>
<td>0 for X, 6 c for Y</td>
<td>4 c for each</td>
</tr>
</tbody>
</table>

Source: Frank (1988), p. 31

Table 3: The Prisoner’s Dilemma with monetary payoff’s

In a repeated game the cooperating players have the possibility to retaliate against a defector. This means, if player Y did not cooperate in the last turn, X defects in the actual one. This is the retaliation for Y’s defection in the last turn. Players try to avoid the defection of the other one because their output with cooperation would be much higher than with mutual defection after multiple turns. The strategy to cooperate basically but retaliate against defectors is called tit for tat. A tit for tat player always starts a game by cooperation. If the other one also cooperates, cooperation will continue. After a turn with defection of the other player, the “tit for tat” player also defects in the present and following turns until his counterpart starts again with cooperation.

Kirsch (2004) locates two main conditions to play tit for tat successfully. First, the other player(s) have to be identifiable. Second, the remaining number of turns to
play must be unknown. If it would be known by one or both players, they could change their strategy to optimise their output until the end of the game by defection in the last turn. There would be no possibility for retaliation anymore. Let’s assume the game has 100 turns. Turn 100 is the last one so there would be no possibility for retaliation anymore. As mentioned above, rational players defect in such a situation. Turn 99 would then be a kind of the last real turn. But there both players don’t fear detection anymore because they defect themselves anyway, because it is rational and they expect the same of their opponents. So the whole strategy is not anymore playable.

Tit for tat situations are often given in daily life. And cooperation usually leads to a higher outcome. Imagine an office where people have to cooperate. They behave nice as long the other one does. Ugly arguments usually start when one employee leaves his job and the number of turns to play (in days remaining in the office) is suddenly known. Cooperation is not necessary anymore. Another very impressive example is situated in World War I illustrated by Frank (1988). Both parties, Allies and Germans, were placed in their trenches involved in bloody battles. Both sides had a huge supply, so the end of the war was not expectable. When a unit met an enemy, they had to choose between fighting and restraint. They played tit for tat and cooperated as confirmed by historical reports. As result of the cooperation Allies and Germans respected lunchtime by stopping the fire, avoiding the enemy’s patrols and respecting hospitals as tactical off limits. Even more evidence for the tit for tat strategy and its assumptions was the point of time when the end of war could be expected or was known. The numbers of turns to play became known. Cooperation broke down. Patrols started to shoot each other again and bombardments became more intensive.

Tit for tat in a game with multiple terms is also playable for a rational player. He will not be beaten in terms of higher outcomes by other players as long he plays tit for tat. His expected outcome over the entire game is the target of optimisation. But emotions still play an important role for a credible commitment. Nobody would trust in beings absent of emotions (as aliens or machines in science fiction movies). Frank calls this state a reciprocal altruism. It is rational to behave nice for the rational player. But emotions help to commit on cooperation or defection credibly. Defection causes anger by the counterpart, cooperation leads to contentment. But
as this example shows, emotions may support rationality. So in the dilemma with more turns both, rational and emotional player play, if they optimise their expected outcome, tit for tat.

In the one shot game a player just cooperates if the commitment of the other player on cooperation is credible enough. Otherwise he cannot be assured that the other one cooperates. As mentioned before, emotions could be a huge support for a credible commitment. But in most situations where a person has to decide between cooperation and defection, no strong emotions as love or respect are supporting a commitment of the other one. Often, persons even don’t know each other very well. How might cooperation come about?

In the second part of section 2.3 answers how cooperation can emerge in this particular one shot prisoner dilemma situations, when no emotion supported commitments do exist. One support may be given by reputation. To introduce best is a citation from Frank (1988, p. 71):

“H.L. Mencken once called conscience the inner voice that tells you somebody may be looking. The distinguished sociobiologist Robert Trivers seems to had much the same notion in mind when he wrote, “…it is possible that the common physiological assumption that one feels guilt even when one behaves badly in private is based on the fact that many transgressions are likely to become public knowledge.”

The mechanics of reputation can be easily modelled with costs and benefits. We’ll leave the environment with players who cooperate or defect in direction to a slightly altered one with honest persons and cheaters. While honest persons generally fit in to the scheme of a person who cooperates, cheaters and defectors are not exactly same. Defection is not something unfair such as cheating, because it sometimes is rational to defect and he may explain his decision in an understandable way. But cheating is unfair in the eyes of the opponent. A cheater is a kind of a defector but not vice versa. What’s fair or unfair is an own question. Below it is assumed that in every society there is an agreement about what’s cheating and what is honest. Often defection is judged as cheating. The following part could also be described with defection and cooperation. But to illustrate it is much more plausible by the chosen way.
People usually try to avoid getting a reputation as cheater. Because with a reputation as cheater long term income decreases significantly. Why? We’re still in prisoner’s dilemmas games. The difference to the example before with multiple turns is that every turn other players meet each other. Not the same couple plays anymore all games against each other. Therefore reputation is the only distinction a player can make of the opponent. As soon a player gets a reputation as cheater he’ll probably faced with “retaliation” in form of defection because it would be stupid of an honest person to ignore the information that the other one cheats (or defects). If the honest person would cooperate with a cheater, the outcome for the honest player is the worst possible, regarding table 3. For players who are willing to cooperate it is finally essential that they can trust in the reputation of their counterpart and identify a cheater.

A cheater on the other side tries to cache his past by achieving an honest reputation or not getting caught while cheating. This is usually under certain circumstances possible. Why does a person cheat? Thousand answers exist. On an economic point of view one is favourable: When the benefits of cheating are higher than cost of being detected multiplied with odds of being caught, cheating is rational. A reputation as cheater causes additional (eventually very high) additional costs. With a reputation as cheater in further terms other players will defect and not anymore cooperate. This decreases the long term income. The cheater is in a defect/defect situation. An honest reputation instead can assure that other players willing to cooperate do so. It supports cooperation and players may find themselves in cooperate/cooperate situations, where the income is usually higher than in defect/defect.  

\[ \text{Benefit of cheating} \geq \text{Probability of detection} \times (\text{Costs of being caught} + \text{Costs of a reputation as cheater}) \]

\[ ^7 \text{Having an honest reputation is not directly an emotion. It is rather a strategy so that a reputation as nice person (who cooperates) may lead to a higher long term outcome. In a world without emotions purely rational players also receive reputations. But emotional actors can again commit more credible on their reputation as explained before in the part about tit for tat.} \]
Two big criticisms on the reputation model exist. First, a cheater cheats also on his reputation. So reputations might be faked. It is about the identification of cooperators and cheaters. Mimicry, emotions and finally also reputation combined together supporting each other should help very well to generally detect or identify defectors or cooperating people.

Secondly, assume that something as golden opportunities exist. For example bring a recently found wallet to a lost property office. Nobody would remark if the wallet is not delivered to the office. In golden opportunities the odds to be caught by cheating are very low, close to zero. The costs of cheating become compared to the benefit very small. A lot of people behave in such situation still honest and don’t cheat when would be fully rational. Why?

First, an explanation could be related to the matching law. It predicts that human people underestimate future gains and over-valuate in relation present benefits. The same circumstances are also given for losses. This behaviour would lead to cheating, also if it would not be rational at all. Not just golden opportunities are used to cheat. Also in situations with higher odds to be detected people cheat according the matching law. But if we concede a certain amount of rationality to a player who cheats under conditions which are not optimal at all the player will remark it. Namely when he can’t resist to present benefits in disrespect to future costs. He’ll remark some bounden rationality and tries to avoid these mistakes by creating principles. A very good example is presented by Kirsch (2004, p. 99-101).

Smoking a cigarette spends welfare, if one likes smoking. The same is valid for a second one. But smoking a lot increases probability to sicken by cancer in the future. This will decrease welfare significantly. The decision to smoke one cigarette has the benefit of one cigarette and the cost times odds that this particular cigarette will urge cancer. The benefit is much higher than the costs. Principles support to avoid such situations. They add some cost of a feeling of personal failure linked with shame. When a person stops smoking and has the principle not to smoke, this one cigarette brings finally high costs. The same argumentation works with cheating in golden opportunities. Perhaps in the first one is not caught. In the second neither.
But the big damage or costs emerge when detected once. From this perspective it is better to not cheat at all.\textsuperscript{8}

Second explanation why people don’t cheat in golden opportunities is the \textit{bad decision-bad outcome fallacy}. People judge decision more often by outcome than by the facts and process under which the decision was made. So if in a country far away in time or place, a thief is caught, imprisoned and finally executed the outcome is really bad. Was the decision to steal something necessarily also that bad? Perhaps the probability of detection was very low and the stealing was very rational. But another thief seeing this execution sees just the outcome and not the decision, so he won’t probably try to steal the same object even when the odds to be caught are still very low.

These were two reasons why some persons don’t cheat in a golden opportunity. The value of a good reputation seems now evident as well as people are very concerned about their reputation. Even if a person acts without any emotional incentives or support a good reputation helps to achieve a superior outcome over multiple turns. The frontiers between rationality and emotions are not that clear or as Franks mentioned in the title of his book: Passions are within reason.

The main implication of this chapter is that emotional commitments are very important in human behaviour and may explain how cooperation emerges were traditional economic theory predicts defection. Cooperation (and so superior outcomes) is often based on commitments, which become stronger or even possible when supported by emotions. The value of a good reputation is relevant in repeated game situations. The answers about why people even don’t cheat in golden opportunities and concern that much about their reputation shows that the value of a good reputation is often very high and can influence expected future income significantly.

Self-interested rational or emotional persons both are concerned about their reputation. It helps to generate cooperation when no emotional commitments are possible.

\textsuperscript{8} In sports a lot of persons might suffer from the matching law by using doping practices. They overestimate massively the actual win of a trophy versus the cost of being in public crossfire, suspended for several years and in worst case ordered to court.
2.4 The Human Quest for Status

“... But outside the world studied by economists, everyone knows that people are more concerned about how the economic pie is distributed than about how large it actually is.” Frank (1985, p. vi)

The section about status is based on Robert Franks *Choosing the Right Pond* (1985). After emotions were discussed as target of actions and in 2.2 and the supporting role of emotions for strategies was outlined in 2.3, this section does not treat emotions directly. But the issue is a very emotional one: Distribution, justice, local status and envy. Economists usually make statements about optimisation, but hesitate in discussions about distribution with serious, non normative answers as cited from Frank before. But distribution is an issue where emotions are coming up. It is a broad range from the table during diner where the question “who gets the last piece of meat” concerns up to the political level where parties negotiate the allocation of state’s income. Discussions in both cases about the final distribution are often very intensive.

Frank tries to explain a part of the distribution issue as economist. He provides as framework to discuss a model about status request from people. In a first step, positional goods will be introduced. A positional good spends status to its owner. What are the key features of positional goods? Secondly, a market model for status will be discussed. In this market status out of positional goods is traded. The chapter will close with some general remarks about the coherence between status, distribution, justice and envy. The theoretical model of Frank is not contradictive to traditional economic theory, but new. It is very valuable to explain different issues where economic theory did not find answers. It will also help in the model about virtual lives. Even more, status will finally be the main incentive for the actors to join a virtual live.

Positional goods are exquisite goods. A big part of the value is generated by the fact that not “everyone” posses the positional good. So the owner draws a certain status out of them. Examples for positional goods are the presidency of a club or party, a
very exquisite car or bodyguards and chauffeur. Also, or even more especially, sport trophies are positional goods. Winning the Champions League, America’s Cup or Formula 1 Championship has the pleasure of a high demand. But the main character of positional goods is their very limited supply. Only one can be first. And when someone wins another person looses. Positional goods are some kind of a price of the contest. The winner receives the prize of this particular contest. The main part of the value of positional goods is created in markets with characteristic of leagues. Just one can be the winner. Only one car is the most exquisite. Or just one woman is most beautiful… A huge part of the value of these goods is defined about where on the scale compared to the others the own good is placed.

But what are leagues exactly? Franks makes three assumptions about leagues:

1. It is a contest with winners and loser.
2. There are “equal” chances at the beginning, which don’t affect the outcome of players.
3. The participation is voluntary.

The first assumption shows the main difference to markets as economists model them up. In leagues there are always winners and loser, not just winners or loser as in classical market models. It is not possible to improve the outcome for all players in a Pareto optimal way. The positional good belongs to the winner as prize of the contest. Equal chances at the beginning refer to rules or regulations. But it does not mean that people have to be equal. Everyone has at least some different talents. One is beautiful but his opponent intelligent, another is fast against a strong one or a weak and a stupid player face each other. Talents finally affect the outcome and the final distribution. Equal chances do not include this. This whole game is played in an environment without any pressure to play, the participation is voluntary.

The model about leagues and positional goods represents also the issue about status. People have a certain demand after status or more precise positional goods and the resulting status. But one person can just have high status in a particular situation, when there is a counterpart with a low one. If every person was a
superstar it would not be something special anymore. The higher status would have been gone. Having a high status is certainly a better feeling than being at the bottom of the group. Or as in section 2.2 shown: A high status usually causes emotional benefits and a low one emotional cost. People try to receive the benefits and avoid the costs. So the first important fact about status is that it is generated in leagues. When there is one with a high status, another one possesses a low one.9

This approach illustrates also one of the problems in the discussion about capability of optimising emotional benefits as done in chapter 2.2.

The second property (besides the league character) of status is its local grasp. People don’t care about the positional goods and status a president of the country owns. Neither are they interested in the situation of a beggar. People compare each other rather with persons of the same social group as neighbours, co-workers or friends. Also people in different countries with completely different GDPs are approximately on the same happiness level as for example in Nigeria and Germany illustrated by Frank (1985, p. 28-36) and Frei and Stutzer (2002, p. 408-419).

A possible explanation is the availability theory of Kahneman and Tversky in Frank (1985). Persons in another country are just too far away and we don’t pay attention to the information because this information is a) emotionally not interesting b) not very concrete and emotional incentive and c) not proximate in a temporal and spatial way. Players compare themselves with players of the same league. One should keep in mind that local status spends beside the good feeling or emotion also real benefits which make daily life easier. In a restaurant for example local status helps to get the best table, perhaps also a dessert for free. Or for example persons as

Socio biological experiments with monkeys show very well the basic mechanics of the emergence and effects of status feelings. In a group of monkeys with two male members there was one male that was much bigger and stronger than his male counterpart. The biologists measured the amount of serotonin, a neurotransmitter which is responsible for happiness or more generally our well-being, in the blood of the two male monkeys. So the strong monkey had a high value of serotonin in his blood while the smaller one has much less in. By removing the strong male from the group the serotonin value of the smaller monkey increased. He was much more relaxed, not anymore full of fear and he was the new chieftain of the group. The serotonin value of the big monkey – whilst in isolation – decreased. Putting the big one back to the group, serotonin values of both male monkeys went back to the original positions. This experiment was done with monkeys, but it shows very clear how status mechanics are working: There is one with high and one with low status or a winner and a loser. The low status urges costs via feeling bad. The high status delivers benefits via feeling good. Frank (1985, p. 21-28)
professors or doctors are treated with more respect than others. There are emotional and also some strategic benefits from local status.

The third very important feature of positional goods and status are the rules of the league and the ruinous competition. As sport leagues most leagues have rules to protect the members from a ruinous fight for the positional good. Frank points out that when no rules exist the league will probably brake up and there could be a reconstruction of new leagues but also a distributional conflict. Anyway, with or without rules the competition for status can be a very wasteful contest. The efficiency of markets can be in serious danger when status as part of positional goods is included. This means that a lot of utility drawn out of a purchased positional good can be destroyed immediately. Rules might help to avoid a wasteful competition but don’t have to.

As example consider a neighbourhood. Tom and Eric like to show off with their cars. So the car is a positional good and spends status to its owner. To simplify the example we assume that just two types of cars exist: a standard car and a high prestige car. The net utility of the standard car is for both neighbours 5. Actually both drive a standard car. Let us assume that the prestigious car does not only spend additional status but also improved driving comfort spends additionally 2 units of net utility. However, the exquisite car is much more expensive and costs additional 5 utility units in terms of substituted money. This means that the net utility of Tom and Eric decreases by 3 when they buy both a high prestige car. Buy the expensive or prestigious car would be very stupid in this situation.

Assuming that an advantage in status delivers some utility or benefits as already mentioned above, perhaps 5 units for this example, the setting alters. Because when we assume that high status spends utility, a low one has to decrease utility or urge costs. The one with a lower status looses 4 units of utility. For example Eric continues driving the normal car while Tom buys the prestigious one. The remaining net utility of Eric by driving the standard car is 5 net utility subtracted by 4 caused by low status. Tom receives benefits from driving comfort of 2 and status 5 subtracted by the additional costs of 5 utility units. Tom’s decision to buy the more expensive car spends him 2 additional units of net utility. It is very rational for Tom to buy the prestige car, because he receives a gain of additional utility. But Eric is faced by the
same incentives. No matter if Tom already bought the exquisite car or not Eric will gain additional utility by buying the prestigious car.

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<tr>
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<th>ERIC</th>
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<tr>
<td></td>
<td>STANDARD CAR</td>
<td>PRESTIGE CAR</td>
</tr>
<tr>
<td>TOM</td>
<td>5 for each</td>
<td>1 for Tom</td>
</tr>
<tr>
<td></td>
<td>7 for Eric</td>
<td>2 for each</td>
</tr>
</tbody>
</table>

Source: Own illustration of an example in Frank (1985)

Table 4: Net utilities of cars in the neighbourhood

Either he’s in the same situation as Tom before. So he will buy the car. Or if Tom already bought the expensive car it is still better to buy the car because he’ll avoid a 4 utility decrease from minor status and gain 2 units by driving comfort against the additional cost of 5. When both buy finally buy the prestigious car, their total utility is on a much lower level than if both would possess a standard car, because no one has anymore an advantage through status what was the original incentive to buy the more exquisite car. The equilibrium is that both finally buy a prestigious car.

This third feature of status about rules of leagues and ruinous competition shows what may happen when two persons compete about their status. The market is not the cause for the inferior final situation, but it can neither avoid this result. To avoid totally wasteful competition people introduce rules to regulate the status competition. This approach can help explaining regulation on labour markets because without, status seeking employees would work to long and hard. Same justification is valid for retirement arrangements. Status seeking people prefer rather to spend their resources in actual, status relevant consumption than saving money for days far away in the future. But luckily not all people are concerned by the same amount about their status. So the willingness to pay differs from person to person. The
following second part of this chapter will show how finally a market for status can work and avoid (at least a part) of the losses described before.

After the description of how positional goods generate their value, create status benefits and finally could also destroy well-fare, the second part of section 2.4 explains how a market for status can lead to some efficiency between people with different preferences for status. The losers and the winners receive the possibility to trade status versus other goods. In a first step it will be demonstrated with the very general example of a labour market. Labour market theory predicts very precisely salary levels over a whole market. The salary is determined by the marginal output of a worker. But inside a company, salary structures are not at all corresponding to every single employee’s outputs. Frank (1985) shows that they are usually very flat.

Why are salary schedules in firms so flat and not as the traditional labour market theory predicts equal to the marginal output of a worker? And how can the value of local status be measured? Traditional labour market theory in general makes correct predictions. But as written, in firms in reality salary structures are much more flat than they are supposed to be. The application of status in a market provides a simple but brilliant answer about why. Employees with a relatively high productivity in a firm have usually a higher status because they are better in their work. But persons with a relative high rank in a company often earn less compared with opportunities they had if they would work in another firm, where the average salary is higher and they were still qualified enough to work in. Instead they are in a more favourable situation and join the advantages high status provides.

A person can sell or buy status by moving from one firm to another. Firstly, for every person it is a substitution effect between local status in a firm and salary. Do I join a company where my productivity is higher than the average but the salary relatively low? Then the employee pays for its status with an abdication of salary which he could earn additionally elsewhere with his qualification. Contrariwise if a person is less productive than the average of the firm the situation is opposite. He receives more salary than he would earn in a company where his productivity is in the average. In exchange his status is very low.
The price of status finally depends on every person’s willingness to pay. Also for firms it is rational not to pay the members among their marginal product (the line with slope one or angle 45°) because the less productive ones would not be paid for their lack of status and probably move away to another firm where they earn perhaps a bit less, but have a better position. It is surveyed that in high income industries salary structures are much flatter. A bureau of lawyers\textsuperscript{10} is close to an equality of salaries. In contrary by farmers the worker is nearly paid for his marginal product – how many pounds of vegetable does an employee clean in one day for example. It could be interpreted that high income professions correlate somehow with a high preference for status. The price paid for status is much higher than in branches with lower income. This is illustrated by the following figures out of Choosing the Right Pond by Frank (1985, p. 43-97).

![Figure 3: The implicit price of the top-ranked position in an earnings hierarchy](image)

In the upper figure the wage structure as it is supposed to be concerning traditional a labour market theory is illustrated by the 45 degree line (marginal productivity = salary). In reality the structures are much more flat as mentioned before and illustrated in the figure below. The price of the top-ranked position with most status benefits is graphically shown by the difference between supposed income by traditional labour market theory and income in reality. The price differs of the top-

\textsuperscript{10}This example is valid for the United States of America. The salary structures in Europe must not be necessarily the same.
ranked and also the other positions differ from branch to branch. The flatter a salary structure is the higher the price for top ranked positions becomes.

Frank justifies redistributive taxation with the same approach used for labour market. In a society status market again has league characteristics, so without losers no winners. The same disposition leads to a similar result. Redistributive taxation can be justified by a market of status. The high status people pay the low status individuals for the status they sell. The high status persons also have the interest to pay the one with lower status to keep them in the community. Otherwise the poor would leave and the less rich one would become the poor with low status. But as showed before rich people (example with lawyers and farmers) seem to have a higher willingness to pay for status, so they will pay before losing status.¹¹

Status is strongly related to distributional questions because of its league characteristics which generate winners and losers. The loser often thinks that the game was not fair. The winner should – on the view of the loser – not receive all the benefits of the positional good. The loser feels righteous indignation concerning

¹¹ How much is your own willingness to pay for status? An example might show its value. Consider a person with an income of 100‘000 € a year, a lovely and beautiful wife, children going to a very good school and high esteem by fellowman has a quite high status in society. One day, he receives an offer to move to another planet where he would earn 1‘000‘000 € (on the same price level as on earth). But there is no possibility of return and most people on this planet earn more than 1‘000‘000 €. This means his children will not go to the best school, the car will not be the best in the neighbourhood and his wife probably neither. But everything will be absolutely better than in actual situation. If you would be this person, would you move to the new planet? If the answer is no, your willingness to pay for this particular status is 900‘000 €.
Elster (1998, p. 68-70). He argues with justice to change the distribution. The winner of the contest on the other hand would describe the feeling of the loser rather as envy than anything else. The loser is in the winners eyes just jealous. Finally it is no surprise that in politics the words justice and envy are used often mutually. Political economics often models policy up as purely distributional. Every interest group tries to get as much as possible from the economic pie. Frank (1985) justified a part of redistribution by compensation to the loser.

What are the main implications of this chapter? Positional goods play an important role because people have a request for status. High status has the property that a person feels good urged by biological causes. Additionally status delivers strategic support in different situations to achieve a higher outcome. Status is created by positional goods in leagues, not purchased in a classical market. But status can be traded on a market by giving up a part of the income for example or with redistributive taxation. This trade can also be modelled up as compensation from high to low status persons, rich to poor, winners to loser or talented to untalented.

The approach on the status issue helps firstly to understand irrational behaviour related to status (neighbours and cars). Secondly, a clear statement on why people are concerned that much about distribution is presented and societies do redistribute. And finally: Talents or attributes play an important role in markets with league characteristics for the final distribution.

### 2.5 Key Tools

Why should we include emotions in economic theory? The past sections showed the role of emotions as target of action, strategic supporter, as information bearer in the reputation case and finally also in a utility destroying version with status. A lot of phenomena can be explained by a small update of the classic economic model with emotions. The Swiss ethnologist David Signer (2002) describes for example witchcraft as one of the main reason why Africa is not growing as it is supposed to. Signer discovers envy as incentive for this. The successful persons of a family are cursed by their relatives to bring them back on the same level as they are. Through the strong belief in sorcery people have serious incentives to not spend too many efforts in work. Being cursed is the worst case. Emotions may help a lot for
economic science, especially in issues where results are still not satisfying and solutions haven't yet been found. But basic economic research about emotions is not very far.

Also in public economics distributional questions often can’t be answered. The suggestions of Frank and the more basic discussion of Elster can provide perspectives for discussion where just optimising could be analysed seriously by economics yet. Below the citation of the beginning of section 2.4 about status:

“… But outside the world studied by economists, everyone knows that people are more concerned about how the economic pie is distributed than about how large it actually is.”
Frank (1985, p. vi)

The aim of this chapter was to provide tools for the essay about virtual lives. Without an economic understanding of the function and effects of emotions it is rather hard to discuss reasons to join a virtual life. Joining a virtual live often is not directly caused by a lack of money for example. The essential clue out of chapter 2 is the including of emotions in a well known economic framework. Emotions, reputation, status and talents can be analysed by the costs and benefits they spend. Very complex constructions are united in a cost-benefit environment. Within this combination clear statements about the behaviour of people out of an economic point of view are possible. Cost and benefit are well known terms. Below the main conclusions out of chapter 2 summarised:

Costs and Benefits of Emotions
Emotions can cause costs and benefits depending on their valence. People try to gather benefits and avoid costs.

Behave nice and Tit for Tat
Behave friendly or cooperative is not irrational at all. Tit for tat is in classical game theory a dominating strategy, being nice one of its key elements.
*Good Reputation*

A good reputation leads the partner in a sequence of games to cooperation. Mutual cooperation usually increases outcome significantly.

*Request for Status*

People seek for status. As other pleasant emotions it spends benefits to its “owner”. Status helps also in a strategic sense as a good reputation does.

*Talents*

People have talents. Talents significantly influence distribution of outcomes league markets. Some talents are advantageous and help to get the price of the contest, so spend benefits. Others are big disadvantages and urge high cost. In a process of redistribution or compensation the loser receives contributions from the winner.

*Market for Status*

Status is traded on markets. Status is paid with abdication of income or redistributive taxation for example. The trade of status is a kind of redistribution or compensation from winner to loser of a contest.
3 The Step into the Web

The chapter *The step into the web* shows why it can be very rational to live in the internet. Which benefits are faced at which costs? It illustrates the incentives and different alternatives of a single person. While chapter 3 is theoretical its implications on and in reality will be shown in chapter 4.

Section 3.1 defines the most common terms and shows the main assumptions. In 3.2 emotional reasons and corresponding incentives to join a virtual life are illustrated. Through the description of emotions, reputation and status in terms of costs and benefits the reasons become well understandable and striking arguments. Sections 3.3 to 3.5 show the possible moves: From real to virtual life, from one to another and finally back to real life. It will be done mainly with a cost benefit analysis about emotions, reputation and status. The goal of this chapter is to show why it can be rational to join a virtual life and it might become even more rational in future. But also the costs and rather problematic issues are included. The analysis finally helps to understand why virtual lives occur and how the externalities emerge.

3.1 Virtual vs. Real Life: Assumptions

For the analysis of virtual lives and incentives to join it, three basic assumptions are taken. The three assumptions are the following:

1. A Person lives a virtual life or a real life. Living a real life and virtual life at the same time is not possible. Changing from one to another life is related with costs.

2. In reality the costs of mobility and change are higher than in virtual space. While moving or relocating in real life to another place has costs, a click to log out and log in elsewhere is very cheap. Furthermore costs of change of the own identity, as an aesthetic surgery for example, are quite costly in reality.

3. People follow an emotion seeking behaviour. A person likes to receive the benefits of positive emotions and avoid the costs of negative one. A loss or gain of status and the concern about the own reputation fits in the same.
Assumptions two and three are not very problematic and quite realistic. Assumption 3 was discussed in chapter 2. Emotions may urge costs and can spends benefits. Persons try to avoid costs and receive benefits. The mobility and change costs in a real life might be very high as relocate or get a new identity (will be discussed below). That their correspondents in a virtual life are relatively low priced seems quite plausible. Assumption 1 is somehow not very understandable and also touched by a lack of reality. First of all a differentiation between real life and virtual life will help us to understand.

Living a real life is living as most people do. Their family, workplace, friends and hobbies are somewhere in a village or city. Relations to other people are created in a “real” environment. For sure also in a real life people use a computer and the internet to work, chat and send emails. But this is just supposed to be a technical support. But the social life does not take place in the internet. Social life concerns all the encounters with the fellowman in a period of time as family, friends, work or clubs. These encounters take place in the real world.

Contrariwise in a virtual life these social encounters and human relationships emerge in the internet. Possible media can be social platforms, forums, chats, games or simulations of reality.¹

A person who lives a virtual life has all his relationships in the web. His social life, therefore all his relationships are fully in the internet. A person who lives a virtual life has following daily routine for example: He gets up in the morning, turns on his computer, logs in the game, logs out and goes to bed. Obviously the person will not survive very long without drinking and eating, and also a minimum of personal hygiene would be advantageous. So the person might buy some fast food, drink and also take a shower sometimes. But important for the assumption is that nearly all his social interactions take place in the internet. His friends live there. The person has nothing to do with people in the real life.

¹ By simulations of reality I consider “games” as Second Life. It’s the open question if this is still a game. In Second Life life and world are simulated as realistic as possible. For sure people have a lot of possibilities, which they don’t find in reality. But in my opinion the difference is that a game is supposed to be some interaction with rules and goals. Both are not really visible in Second Life. A second difference to games is that they should be some simplification of the reality (through rules and goals). Thirdly in the simulations of reality as Second Life already companies are in and manage a part of their public relations there. It’s something bigger than a game. These are the reasons why I make this distinction between games and simulations of reality.
This assumption seems not quite realistic. Building a whole social network in the internet and to abjure the real life is rather fiction. But in chapter 4 the introduction will show a sample of virtual lives as they exist today. People have up to 80 hours a week in game time. And some additional hours they are online to watch movies or read. These are virtual lives as they exist already. A second serious concern about the assumption is the opportunity cost from the missing job. Surprisingly (or not) this is not a big problem, because often people with low income or even no occupation join virtual lives, but more about this below in the following sections.

Most important is to verify the assumption about living one or the other life, and not both at the same time. People can change from one to another life, but some of these changes are linked with high costs, so they won’t be done often. The discussion is ongoing in sections 3.3 to 3.5.

3.2 Market Failure of Status, Reputation Resets and Changing Talents: Reason of a Virtual Life

After the assumptions made in 3.1 this section three important incentives or reasons to join a virtual life (status changes, reputation resets and talent hiding) build the basis for this thesis. Surely other reasons to leave the own reality exist and the emergence of virtual lives cannot exclusively be described by these three reasons. But they seem to be quite important and cannot be discussed without the basic knowledge about emotions within economic theory out of chapter 2. Usually money plays just an indirect role.

Emotional issues influence the decision to join a virtual life even more. Having not enough money is rather a cause urged by the same circumstances as the lack of emotional benefits is than a direct incentive. This section will illustrate these three stark motivations to join a virtual life which are rarely included in common discussions about spending (too) much time in the internet.

The first reason discussed in this essay and probably the most powerful explanation to “live” in the internet is the human request for status (according the theory of Frank in section 2.4). Two problems occur in the status theory of Frank.
The first problem concerns the persons which are already on the bottom of the social hierarchy but have a preference for more status. They cannot give up an additional amount of income and buy a higher status position as proposed by the theory, because they are already in the lowest possible class of jobs and so income. It concerns even more people who are workless and don’t find a job because of a lack of qualification (or talent). The resources to buy status are not given. The only possibilities are to move away from the life with the low local status or to be compensated adequately by the high status members. But compensation is a question of distribution. A different income situation causes different preferences of distribution. The rich don’t want to pay more taxes and redistribute more. The poor would like to increase redistribution.

The second problem is a kind of market failure of the status market. A high status member usually prefers a smaller amount of compensation than the person who receives it on the bottom of the ladder. So far this is no problem because the person who is not happy with the compensation could move away to another life or pond as Frank writes. But moving causes mobility costs, and people who already receive social benefits from the state cannot afford to relocate in another region or country. Further costs people with a very low status usually have to concern are information costs. Reading laws and rules of procedures can be very hard. So is knowing the possibilities which exist to receive more benefits from the state. Even more difficulties are given when reading is not that easy for the particular person or the state does not compensate its members of the bottom. The idea of Frank about status markets is brilliant. But it’s dangerous to underestimate the costs of information and mobility. People on the lower status ranks suffer more than others from these costs. A move into a virtual life causes less (immediate) costs than relocating in reality. The request for status is a strong incentive to consider a move in a virtual life, especially for people with no possibilities to pay the price for increasing status or those who are not compensated well enough.²

² Markets include all as labour market or redistribution via taxation as discussed. Other less expensive possibilities to avoid suffering from low status, as losing oneself in a fantasy world by watching television or reading books are discussed and compared with a virtual life in chapter 4. Drugs are also considered there. The big differences will be pointed out.
As mentioned the status argument related to virtual lives concerns especially people on the bottom of a society or different social groups. The reason to change into a new life is strong in such a situation. Usually they also have low income or don’t have income at all. State benefits cover the costs of a minimal living standard. The very bad or not given perspectives in reality compared to the “new” life in the internet are very poor. Logging into another world is very attractive as long as food and flat are available. In the internet the cards about the competition for positional goods are reshuffled. People who don’t work in reality can spend more time in the web, and improve their talents there. It’s quite attractive. A workless person may become leader of a guild, a fat kid a respected agent of an organisation... Benefits out of status of might increase significantly.

Second incentive to leave the reality discussed in this essay is about reputation. The disadvantages of a bad reputation were shown clearly. In a lot of situations the reputation as defector will result in a low outcome. Goal of a person with reputation as defector usually is to cover or drop it. But in a community it can be very costly to hide it. Imagine a village with 1000 inhabitants. If one is a defector the other inhabitants know this. Relocation is often the only solution. A new alternative can be a new identity within a new environment. In reality this is very costly. By a login in a virtual world real life identities are disrobed easily and not anymore requested. With a new identity the old reputation is gone. The reset of reputation with a new virtual life is linked with less cost than relocation or changes in the real world. ³

But what does a bad reputation mean in reality and not just in a game theoretical design? How big is its real grasp? A person with a really bad reputation does probably not have a lot of friends. Perhaps also its family turns away. A bad reputation may influence life and corresponding emotions. Having no friends or family may urge emotions with a very negative valence and therefore cause costs. The social network of a person with a bad reputation is usually small. The strategic

³ If it’s that easy for a defector to drop the bad reputation there (in the web) would be a big number of “defectors” and nobody would cooperate anymore. Different no’s are countering this statement. The most important one is the explanation that people also in a virtual life with a new identity have to build up a reputation. With no reputation in the beginning no one assumes that the person will cooperate.
disadvantages, as shown in theory, are not able to describe the whole impact of a bad reputation.

Another important characteristic of reputation that is rarely mentioned is its expressiveness for the person itself. Reputation cannot just tell other who the particular person is but reminds also the person itself about it. Having a bad one causes occurring emotions with a rather negative valence which urge cost. In these cases having no reputation in a new world is less painful than having a bad one. In a new environment with a new identity usually reputation is reset, so possible strategic cost because people do not anymore cooperate at all or emotional costs are avoided.⁴

The third strong reason to join virtual life is hiding or even changing own talents and attributes. In the competition for the positional good talents influence massively who receives the prize of the contest. Appearance, intellect, health and look play important roles. Persons who have better attributes than other have a lot of advantages in a broad range of situations over the whole lifetime. In contrary people with bad talents, attributes or even disabilities suffer from significant disadvantages.

In his model of relationship or marriage market Becker clearly introduces talents by giving a ranking to all participator of the market. The worst attractive person receives a rating of 1, the most attractive a 10.⁵ With the efficiency of markets usually ones meet ones, twos match twos and so on. Surely a one has no chance to get a ten.

Imagine a guy who is intelligent and humorous, but incredibly ugly and stinky. In the market he’s rated as a three. Generally he’ll match girls who are also threes. In virtual life, for example in a love chat room, appearance plays no role. The other person does not smell or see anything of his rather less attractive side. He is suddenly rated by seven and can look out for higher rated girls than three. When they will meet in reality after some chat dates, for sure he’ll still suffer from his

⁴ Again, the grasp of a bad reputation is not limited on prisoner dilemma situations with cooperation and defection. It’s also possible that he’s got a reputation as a too expensive salesman, drug addict or even murderer. All bad reputations bring corresponding disadvantages with them as good reputations may help a lot in cooperation situations and alter outcome.

⁵ This does also include income, social position and everything related to the person. It’s a kind of an overall rating and not just focused on appearance or intellect.
negative talents. But he got the opportunity to come in contact with this other person and getting a first date. This is a shot which would have been nearly impossible just by meeting at a party. Perhaps the girl is already very attracted by the good talents of the boy and she will accept the other “losses”.

Another very impressive example for the possibility to change attributes or talents in virtual life is the creation of avatars. An avatar is a graphical representation of a person in the internet. It can be a picture attached to a forum account as well a three-dimensional character in a simulated world or a game. It may be any kind of creature, human, hero or whatever the person in the web controls. This avatar is often created by the person itself with respect to some rules of the world in which it is created. For example a disabled person in a wheel chair can suddenly walk. A fat kid playing a hero can jump over cliffs and or even fly around. Also much smaller changes as a more attractive look may spend a certain benefit to the creator of an avatar. Yes, these are just imaginations. But imaginations spend benefits, at least in a short term perspective. People have usually a willingness to pay for imaginations.

The willingness to pay for certain imaginations was measured with psychological methods by Jungermann (2008). For example people are willing to pay much more for a funeral on graveyard with a beautiful view on the lake than on a graveyard close to a waste deposit. Not just avoiding bad imaginations got its real price, also good ones are “purchased”. A guest in a hotel with the choice between two identically equipped rooms will pay for the room where Brigitte Bardot (example from the paper) slept much more than for the other one. These imaginations are often linked with emotions, especially emotions with strong negative or positive valence.

With avatars people have the possibility to negate talents they don’t like and add others they would like to have. A person doing so surely knows that this is just a simulation and not given in reality. But it would be very arrogant to assume that no people exist who prefer these simulations or imaginations to reality. The argumentation closes with a comment which might seem a bit cynical: Persons who are imprisoned in the body of the other sex have the possibility to change their gender at least virtually. The most expensive alternative would be a sex change operation. But not just avatars, also chats or forums can help to influence effects of talents and attributes.
Below the three main reasons to join a virtual life are summarised. These are not the only motivation to join or live a virtual life. Addiction, fun and occupation are further important examples. But the discussed features from this section are very likely ignored in a discussion. Combined with the assumptions of section 3.1 they result in strong and very rational incentives.

**New Status Market**

Low talented people (with a small budget) might suffer from their weakness in the league market for positional goods. A new market provided in a virtual space is very attractive alternative compared with the possibilities in reality in terms of costs and benefits.

**Reputation Reset**

A bad reputation damages like a good one helps. Changing or hiding reputation in reality can cost much or even is impossible because one is not able to get a new identity. The grasp of reputation is larger than direct theoretical impacts show: friends and family, so very personal relationships may be affected. Creating a new identity in the internet becomes a valuable alternative.

**Attributes, Talents and Avatars**

In reality some people have advantages with talents compared to others. In the web other talents become more important than in real life. The cards for the distribution of attributes and talents are reshuffled. Disadvantages can be avoided through changes or creations of new talents and attributes.

**3.3 The step into the Web...**

In an economic frame costs and benefits are key incentives. Furthermore in this approach reputation, status and talents are reduced to this cost-benefit dimension. Different emotional issues can be theoretically compared with monetary costs and benefits. Goal of sections 3.3 to 3.5 is to show under which circumstances it might
be reasonable to join a virtual life. Which costs are faced to which benefits? In section 3.3 the first situation is analysed: When is it reasonable to join a virtual life out of a real one? What are the alternatives?

Consider a common real life of a certain person. Assumed this person gets benefits from emotions with a positive valence as it suffers or receives cost from negative ones. Costs are usually incentives to change something. Avoiding cost and gathering benefits is a daily process of human life. Second assumption is that one might live only a virtual or a real life at one time, but not both together. Switching between lives or joining a new one is linked with costs and benefits. Additionally the costs of mobility and change are much lower in a virtual space than in reality as discussed in 3.1.

In real life a person may suffer from costs caused by emotions, often also through disadvantages of talents. Talents influence status. But they also urge directly costs. Having a disability or looking ugly causes a lot of problems or at least averts a lot of situations where possible gains could be earned. Basically it plays no role which costs these are, because usually people try to avoid any kind of costs. Finally, when the person is faced with costs in real life, three alternatives are considerable:

1. Accept the status quo and live with the costs

2. Move to another real life

3. Move to a virtual life

As long the costs are not unacceptable high, alternative one is surely a possibility. But as soon the costs are growing to a certain level another solution is preferred. In the case of a low status or a very bad reputation moving to another location in real life might help. But moving elsewhere is linked with costs of mobility, administrative issues and also costs by giving up the parts of the actual real life the person likes. But for a person who lives from social benefits from the state the costs of a moving into another country are too high or it is even impossible. Firstly social benefits would be lost and secondly this person wouldn't be allowed to immigrate. A second case could be a child whose family lives in a town and the child itself cannot influence the decision where to live. Where moving abroad would be helpful in many

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6 Another, extreme alternative would be suicide. It will not be discussed in this thesis.
situations it isn’t reasonable at all in the case of talents. No matter where the person lives it suffers from disadvantages of talents. One might imagine that perhaps in different cultures different talents lead to advantages, but this rather is an exception and will not be discussed furthermore. When option one by accepting the status is not acceptable because caused costs are too high through disadvantages of status, talents or reputation, alternative two and three remain.

Moving to another real life may be expensive or even impossible. A given lack of talents can’t be compensated neither by a move to another real life. An identity change is required, for example a face lifting or another kind of aesthetic surgery. Costs remain high.\(^7\)

The third possibility with respect to the assumptions and according to the model is a movement into a virtual life. Cost-benefit relations shape dramatically within this alternative. First of all, the movement itself into a virtual life is relatively cheap. The only (immediate) costs are buying a computer with internet connection which is most cases already present.\(^8\)

Mobility costs are very low. The benefits of moving into virtual life are also strongly linked with the possibility to create a new identity. In real life creating a new identity causes at least some of the following cost: New name and passport, new living place, break-off all old relations, emigration, transfer of money to other accounts, psychotherapy or even a look shaping surgery. In a virtual space the identity can just be created by a definition of a new name or by creating a new avatar. The only immediate recognition is possible via following the IP address. Anyway, the cost of creating a new identity or avatar in a virtual life related to the one in real life is very low priced. With very low costs following features are provided by virtual life:

1. The old status is not relevant anymore.
2. The reputation can be reset. Reputation is gone with an identity.
3. Talents can be negated or other even created new.

\(^7\) It’s not true right like this. An exception could be when an over weighted person joins a regimen in a clinic which is bolted hermetic. This is also a kind of moving into another real life if it’s for a larger period of time. Generally changing oneself to improve status, reputation or talents is surely an alternative which is often chosen. But the related costs are high.

\(^8\) Further costs which are not directly visible yet will be shown and discussed in sections 3.4 and 3.5.
What is the impact of low priced identity change for status and reputation? With a new identity, avatar or even a new life the suffering due to low status is blown away. The person with its new identity has a new chance in a new market for positional goods and status. The fight for positional goods can be restarted. This does not implicate that the status will be higher in the new situation. But at least disadvantages of the old life don’t cause costs anymore. Nearly the same argumentation fits for reputation. The old reputation is gone in the moment when the old identity is dropped and the new one is taken. In the case of a good reputation in real life this surely is rather a cost, but in the case of a bad reputation it is a gain. And the related (immediate) costs are very low.

In the case of talents the benefits can be even much more impressive. Old, bad talents as an ugly appearance, overweight, disabilities or other handicaps related to the body are fully negated. In a chat or forum a lot of talents which cause in real life disadvantages don’t play a role anymore. These disadvantages are also gone for the competition for positional goods. The prerequisites to acquire positional goods and therefore status can be even much better. But let’s go back to the example with the man and his ugly appearance but the very smart intellect in a love chat. The prize in the contest here are the girls. In the fight for positional goods (which are the girls) his rating increases from three to seven because the appearance does not play any role anymore. Newly he has the chance to get a seven, not just a three as in real life. The distribution in the league can alter very hard.

But the advantages don’t stop with negation of bad talents. Additionally with creating an avatar the person can give itself talents which are very positive. A normal person can fly, a fat kid is suddenly a hero and the disabled one is able to walk. These are just imaginations. But in situations where negative talents cause costs this can quickly be secondary. Also the benefits of imaginations are nice to have. As mentioned, people have a certain willingness to pay for imaginations. And in the case for a virtual life, the (immediate) price is very low.

When the status quo is not a considerable alternative anymore, one has to compare between joining another real life or moving into a virtual one. The cost-benefit relation of moving into a virtual life is massively superior to a new real life because mobility and identity changes are low priced and expected benefits for status, reputation and talents are much higher.
Perhaps the case of acquiring a new real life is even not possible. It is also a question of how many a person can afford or about the size of the budget. Obviously people with a low budget will rather join a virtual life, because they cannot afford the high costs of a change in real life. Or the other turn, people with a low budget usually suffer more from a low status and want to change away from status quo. Status is linked to talents. The possibility of a virtual life is a new alternative to status quo by moving to a new life with a very good cost-benefit relation and many new possibilities.

3.4 …between Virtual Lives…

In the last section the incentives, costs, benefits and alternatives of a movement from a person in a real life were discussed. This section shows the possibilities of a person already living a virtual life. What are the existing alternatives? How do they

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9 RL: Real life
VL: Virtual life
affect status, reputation and talents? How do costs and benefits alter in relation to a person who has to make a decision out of its real life as in the last section?

The movement into a virtual life was described nearly as a walk into paradise. But one should also take in account that a person may not like what he finds in the new virtual life. Discontent by new talents is well imaginable. Or perhaps because the person defects in a lot of situations its reputation is bad again. And finally also in the status case the fight for the positional goods could be lost. A life in the web which seemed to be a very attractive alternative can turn into disappointment because of the same reasons as in a real life. The alternatives the person has are the same as in real life. Just the initial position changes in virtual life. Which possibilities are given?

1. Accepting the status quo of this particular virtual life

2. A movement into another virtual life

3. Go back to the (old) real life

Alternative three will be discussed in section 3.5 below. It is usually linked with very high costs. The person will think twice about this (in this model with its very restrictive assumption about living just a virtual or real life). Significantly low priced compared with going back in the real life are alternative 1 accept the status quo or 2 move into another virtual life.

As in reality in virtual life the costs of status quo could be not acceptable anymore. Reputation becomes bad again, status could be low or also new talents could be less delightful as expected. Also imaginable is that the benefits are not high enough. Status quo always is an alternative. But the internet is a very fast changing world (at least at the moment) and perhaps remaining in the status quo is not possible. For example a game is shot down and the avatar does not exist anymore. The person must move out of this virtual life. However, the change into another one is usually not very expensive, when no benefits exist anymore in the actual one. As in the movement from real life to virtual life the cost of change and mobility are the same by going from virtual to virtual life. They are compared to changes in or between real lives low priced.
At first glance also benefits remain the same as in the section before. Reputation can be reset, status disadvantages negated and talents improved. The old identity can be dropped easily and a new one can be taken. But there is one big difference to the latter case. Assumed that the costs of changing and mobility are very low, incentives to change grow. Movements from one to another virtual life become more frequently. In this situation marginal benefits are much more relevant to analyse. While costs remain from change to change same, marginal benefits may decrease. Why?

When the first step from reality into the internet spent a big benefit, as discussed, can a second one still produce such a gain? Perhaps yes. Reputation might be very bad again and status very low. In the case of talents such a strong improvement as in the latter case is not possible anymore, because talents are already custom-made. For example when it’s already possible to get the girl desired, what could the big improvement be in this dimension by a further change or movement? The same circumstances also play in the situation with an avatar. When fighting strong villains is already possible, is the benefit of flying such an improvement?

While it’s not very clear how the marginal benefits alter in a first change to another virtual life further movements could lead to decreasing marginal benefits. From move to move people improve the new identity closer to a certain optimum or ideal imagination. The status and reputation can fall again and again, but up on a certain frequency or speed of switching they don’t have the possibility to improve or decrease much anymore. The benefits of change to a new identity can become smaller and smaller. Especially when the changes are done often, status and reputation can just be created difficultly in such a short time in a certain life. But the incentives to change frequently remain given through the low costs of mobility. Benefits remain still bigger than costs after some changes and movements because the costs to do so are that small. The situation can turn into a vicious circle.

But it does not have to. It’s also possible that the person is satisfied after switching from real into a new virtual life and stays there. It’s also very likely that one is happy with his real life and stays. But changing frequently can cause decreasing marginal benefits.
Decreasing marginal benefits can be a serious problem. The low cost of change and mobility in the internet give a certain reason to switch very fast to new lives. But with often changing the own identity same problems come up as discussed in the case of reputation resets. The person might ask itself who it is? What's the value of another new identity when all old ones kind of failed? What do the new talents express? First reasonable changes turn into losing oneself between different virtual lives and decreasing marginal benefits.

3.5 …and back

After discussing the alternatives of a person in real life confronted with certain emotional cost seeking for emotional benefits in section 3.3 and similarly the case for people in a virtual one in 3.4, this last section analyses the case of a return in the real life. It’s the third alternative for a person in a virtual life. There are two possibilities:

1. Join the “old” real life

2. Movement in a new one

There are just slight differences between these alternatives which will be discussed below. The following text will assume that the person returns to its old life. What are
the incentives to go back? Which benefits attract? First, reasons of the person who
is still existing - but not living - in reality could be pushing him back as perhaps some
issues concerning family, running out of money to continue living online, technical
issues with the internet connection, perhaps a new occupation or as mentioned that
he’s got a bad reputation, low status and not satisfying talents again. Also related to
talents is that the body of the person in the real world could be damaged seriously
from not moving and staring into a screen all the time. A lot of movements and
changes of identity can also create an incentive to go back because of losing
oneself and decreasing marginal benefits. Probably most important reason to go
back is a lack of money to finance the virtual life through losing occupation or social
benefits. By going back to reality the really disastrous and mean element of a virtual
life could manifest: the corresponding reality.

If the motivation to leave the reality was a lack of status, a bad reputation or inferior
talents, the person will be faced again with them. The talents are again the old ones.
The boy shapes back from the hero to the fat child, the disabled person can’t walk
anymore and the person in the love chat can expect dating women with maximal
rating of three. The difference between these two states is quite huge and emotions
emerge with a negative valence. Sitting in front of a computer all the time can also
make some talents worse. Not moving at all is not very wealthy and perhaps a thin
person suddenly became fat. Also other still existing positive elements of the old life
as relationships could be destroyed meanwhile because all time was spent in the
web.

The status situation is similar to the status experiment with the monkeys. The only
difference is that the low status individual is taken out of the group (instead of the
strong one) and put into a new one where he is the alpha animal. And finally he has
to go back. But the effect remains the same. The reputation is probably the same or
worse because a “nerd element” was added. The return can be summarised as an
emotional earthquake. The cost caused by negative emotions is very high.
Perspectives to go back into a real life are really bad. But going back can also mean
going back into a new real life. Perhaps a partner was found in the chats or the
leadership of an online-guild upgraded some talents. Self-esteem might have been
discovered and could open new perspectives. Anyway, in the strict framework of the
model a move back to real life rather urges high costs than any benefits. How the
effects really are will be shown by the future. Actually much more virtual lives are about to emerge than to end.

Figure 7: Range of cost-benefit relations in different movements and changes

What was observed and also discussed in public about virtual lives are nearly just the negative effects or costs which were also shown in this essay. The benefits out of a move into a virtual life or also a positive return in the old real life are rarely mentioned. This approach of analysing the new possibility a virtual life provides, to get emotional benefits, has the aim also to show which elements are positive and spend benefits. The link to the real circumstances and the ongoing discussion, an analysis of the validity of the model and its assumptions, implication for public
economics and a light at the end of the tunnel will be offered in chapter 4. Below the main implications of chapter 3 summarised.\textsuperscript{10}

\textbf{RL to RL: very costly and small possibilities}

Changes and movements in real life are usually costly. Possible related benefits are not that high.

\textbf{RL to VL: efficient cost-benefit relation}

The emotional benefits gained in such a movement can be very high. Corresponding cost of change and mobility are relatively low.

\textbf{VL to VL: decreasing marginal benefits and losing oneself in the internet}

The costs to join a new virtual life are very small. Incentives to switch often are given. Decreasing marginal benefits make these alternatives problematic. Losing oneself in the web is possible.

\textbf{VL to RL: crashing with reality and high costs vs. perspectives}

Going back to the real life takes most emotional benefits which existed. The person is confronted with very high emotional cost. The return is also what is discussed in public. But the possibility of a new real life creates also perspectives. This discussion is ongoing in chapter 4.

\textsuperscript{10} That a person might live until its death in the internet should be kept in mind. This would avoid the emotional cost of the return and is not that unimaginable. More about perspectives of virtual lives in the future is discussed in chapter 4.
4 Virtual Lives

After the theoretical foundations in chapter 2 and the cost-benefit analysis of virtual lives in chapter 3, chapter 4 is the intersection to the reality. First, questions of applying the theory on reality are answered. Secondly, the externalities and corresponding policy implications will be discussed.

(4.1) How do virtual lives look like? Three examples will be shown. What are different and much more common incentives to join one? (4.2) Why is the model with its key assumption that one can just live in reality or in the internet expressive and useful? Are these circumstances really given today and in future? (4.3) Why are drugs, movies or dreamlands not a substitution? Are virtual lives based up on addiction or reason? Why do specialists have problems to define internet addiction precisely? (4.4) Which externalities of virtual lives on societies exist? What are the implications for public economics? (4.5) Shall virtual lives be regulated? Is it even possible to regulate seriously?

4.1 Virtual Lives – A Sample

Section 4.1 contains two parts. First, what are virtual lives? How do they exist in reality and what do they look like? Examples will be shown and analysed by the model. Secondly, are the reasons (status, reputation and talents) to join a virtual life realistic? What alternatives do exist?

Journalist Robbie Cooper (2007) met avatars in different internet worlds. Via these encounters he arranged meetings with the creators of the avatars in real life and portrait them. Based on Cooper’s report Ariel Hauptmeier (2007) did the same for some particular cases. Below three portraits are reproduced and analysed with the impacts out of chapter 3. Where Cooper focused on very “positive” examples, Hauptmeier illustrates other possible outcomes.
**Portrait 1**

Jason, 1975  
Crosby, Texas, USA  
Game: Star Wars Galaxy  
Avatar: Rurouni Kenshin, rifleman  
Average hours per week in game: 80

“The difference between me and my online character is pretty obvious. I have a lot of physical disabilities in real life, but in Star Wars Galaxies I can ride an Imperial speeder bike, fight monsters, or just hang out with friends in a bar. […] I play online games because I get to interact with people. The computer screen is my window to the world. Online it doesn’t matter how you look like. Virtual worlds bring people together – everyone is on common ground. In the real world, people can be uncomfortable around me before they get to know me and realize that, apart from my outer appearance, I’m just like them. Online you get to know the person behind the keyboard before you know the physical person. The internet eliminates how you look in real life, so you get to know a person by their mind and personality. In 2002 at the Ultima Online Fan Faire in Austin, I noticed that people were intrigued by me, but they acted just if I was one of them. They treated me as an equal, like I wasn’t even the way that I am – not disabled, not in a wheelchair, you know. We were all just gamers.” Cooper (2007, p. 15)

**Portrait 2**

Sean, 1971  
Washington, DC, USA  
Game: World of Warcraft  
Avatar: Dragons, shaman  
Average hours per week in game: 33

Sean speaks about his guild:

“Our members come from all walks of life, from all over the world. They are truck drivers, lawyers, doctors, active duty military personnel, college students, sales people, computer programmers, homemakers. […] These people aren’t just pixels on the screen. They’re family. Some of our members have met through the guild, fallen in love, and gotten married in the real world. Others have received jobs or
legal help or medical advice from their guild mates. [...] In the game, no one cares what you look like or how much money you have or don’t have. All the things that divide us in the real world – politics, religion, ethnicity, and so on – don’t matter in the virtual world. The bonds formed by virtual worlds are just as real as those in the real world.” Cooper (2007, p. 62)

**Portrait 3**

Marco, 1980

Germany

Game: World of Warcraft

Avatar: Eressa, druid

Average hours per week in game: 82

Marco has lost everything, girlfriend, job, apartment and car, became pale and plump. He hasn’t left his room for nearly two years and gained 20 kilos. Actually he’s writing a farewell letter to his avatar, his friend, in a detoxification centre somewhere in Germany. “Hi Eressa, can you remember the day when I created you? It was on 11 February 2005, the day when World of Warcraft went online in Germany. I took additional holiday to start at the very beginning. Every time we spent more time together, the nights became shorter and the time passed very fast. [...]”

As child he had a speech disorder and was very shy. His father was often drunk and when his parents argued, he put on his headphones and played on his computer. In World of Warcraft a lot players looked up to him because of his well equipped druid and delightful play style. He found a new talent in himself which he didn’t remark before: burning ambition. He did not leave his flat for weeks, the curtains were drawn and the alarm rang at 6 am – not to work but to play. Finally, in the detoxification centre, he deleted the avatar in a few seconds, after played it for two years 8500 hours in total. Hauptmeier (2007, p. 128)

Jason especially did the talent change. He’s still living a virtual life. 80 hours in game time per week is enough evidence. He joined the benefits from a movement from

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1 The original essay is written in German. The translation into English is analogous.
real to virtual life, and does actually not suffer from much cost. Jason could probably improve all: Talents, status and reputation. Where the benefits for talents are obvious, the reputation improvement is the new friends. With 80 hours game time per week he’s probably also one of the best players in the world, so his status also increased significantly.

Sean from portrait number two has got a moderate average time spent online. But still 30 hours are pretty much for one week besides job and family. It’s not a classical virtual life because Sean hurts the main assumption, to live just in one, but also has a real life. Probably a huge part of virtual lives are rather similar to the one of Sean than to Marco’s and Jason’s.

Also Marco (portrait three) gathered benefits in virtual space. But he made additionally the step back to a real life – in his case a new one. New circumstances he was faced to were much worse than before. He suffered from very high cost of old talents and even worse reputation and status.

Two examples are very extreme. The time both spent and spend with playing their avatars is incredibly high. Probably more people are moderate as Sean. Still 35 hours online per week implicate that besides his work not much time is left for other stuff in real life. It’s not anymore a purely virtual life. But the effects he describes remain nearly the same for casual virtual lives. The three examples are far away from a serious proof for the cost-benefit analysis out of chapter 3. The aim was to illustrate how virtual lives can be integrated into an economic framework, to understand the circumstances and explain them. Estimations about how many people have an avatar and go up to 200 million people by Gamezapp (2008). Just World of Warcraft alone has 11 million players. A lot of other games exist. About how many people worldwide use other forms of living in the internet like excessive use of chats, forums or platforms as YouTube no estimations are available.\(^2\)

Surely not all people follow the pure incentives as status, reputation or talents to live really a virtual life. For a lot of people the use is reduced to dimensions as a hobby or a job. A lot of online games received a characteristic as sport and are generally called e-sports. In USA the major gaming league organises different already high

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\(^2\) A further discussion about not purely virtual lives and the very restrictive key assumption that one lives one or the other life will be done in section 4.2.
endowed tournaments in different games. In Asia, especially South Korea online
gaming is already for 10 years very popular. Professional players have same status
as sport or movie stars and are sponsored by huge companies or even the military.

Three different categories of reasons to join a virtual life exist. First it can be some
kind of free time pleasure, hobby or sports. Also statements from people living in big
cities lead to the conclusion, that virtual nature spends them a possibility to relax. A
second reason might be occupation or job. And finally the stronger ones are given
by status, reputation and talent improvements. Where is the difference between
these three groups? The strong reasons often lead to a fully virtual life. People really
do use the possibility to change cost-benefit dispositions out of an old life within a
new one. They lead to the result that one might lose his real life completely. As long
as the incentives are more pleasure oriented or caused by a occupation, rather
casual virtual lives emerge with less online time. These people still have a real life or
at least a lot of components of a real life beside. So the theory of virtual lives does
not fully include a big part of the people have an online identity.

Conclusion: Different reasons to join a virtual life lead to different types. Where the
strong incentives tend to emerge pure virtual lives, the pleasure orientated or
professional ones don’t have to create it.

4.2 Loosing the Key Assumptions – Perspectives and Validity of the
Model

This section concerns about the validity of the model with respect to its
assumptions, especially the key assumption about living in one or the other world,
but not in both at same time. In a first step the key assumption will be discussed.
How do the resulting costs and benefits change, when the assumption is loosened?
In the second part the assumption about mobility will be discussed. What are the
perspectives of virtual lives in the future? The internet becomes more and more

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3 Especially in Asian countries people work as so called power levellers. They play avatars of other
people to improve their skills, sell virtual for real money or do other nasty and unpleasant tasks in
games. The services are sold to people who aren’t able to spend more time within their avatars and
prefer to spend a part of their real income into the own avatar.
popular, useful and relevant for whole life. It’s an outlook about what might happen and how the implications of the model could be influenced.

Loosening the key assumption – people live on or the other life – has a big impact: The model is no longer useful on first sight. In reality, much more people live in a moderate way in the virtual space and still have a major part of social interaction in reality. The model just holds anymore for persons who really live a virtual life as Jason and Marco as described in section 4.1. It remains valid for people who have motivations as status, reputation and talent changes. Their incentives usually lead to a virtual life. But for all the other people who have reasons as hobby, fun or sports, the model cannot explain their acting. But this does not mean that they can’t join benefits or suffer the costs of a virtual life. The original incentives may suddenly turn into the others.

When the motivation was first gaming, perhaps some hours per week, this amount of time can increase significantly. Playing more and more turns away from real life and pushes the person rather into a virtual one. Without having the reason to live a virtual life a person might be in one without recognising it. From that moment on the person is in the exactly same situation as a person with the strong incentives. Perhaps because in reality talents, reputation and status aren’t that bad the costs from a return to a real life are not very high. But basically the situation becomes the same. By joining a virtual life with reasons as fun the model does not explain the step from reality into the internet, but further steps as changing or leaving the virtual life can still be explained by analysing the particular costs and benefits. Imaginable is that they are not that exorbitantly high as with the other motivations. What in fact often happens in reality is that real and virtual life become conflicting goals because of restricted time budget.

Secondly, what happens when the internet and its possibilities change or grow? Is the model able to take technical change into account? The role of the web becomes more and more important. The question is how? Obviously we don’t know yet and can only guess. Science fiction authors are a group of people who think about issues like this most. Tad Williams (1996) describes a possible development of the web in his novel Otherland which is placed in the year 2300. A person logs in the web via goggles and sensors at the hand. Keyboard and screen are out of date. The
web don’t have a two dimensional design with homepages anymore, it becomes a fully three dimensional environment where persons are logged in with avatars. A big part of interactions in a very connected world take place in the web. A similar image is drawn by Neal Stephenson (1992) in *Snow Crash*. The internet becomes a so called metaverse, a kind of another reality where people live also with their avatars and take refuge from the inferior reality.

For such imaginations of the future the model would perfectly fit. It would become even more valid. Perhaps a lot of reasons to join a virtual life should be added. A virtual world as substitution for reality is well imaginable. But it depends very strong on technical progress in further decades or centuries. Is it possible that the model loses its validity in the future? Yes, it is. Especially in all scenarios where the internet is a kind of shot down or regulated very strictly. But the increasing significance of the internet for daily life, new technical achievements and an ongoing intersection between reality and virtual space seem much more plausible at the moment. The internet can become a huge part of reality and so also the lives which take place there.

Conclusion: Eliminating the key assumption causes certain difficulties for the model to explain the reason to join a virtual life. But once in, the disposition with costs and benefits becomes explainable and the expressiveness of the model is guaranteed. Loosening the key assumption shows what becomes for most people in living part-time in a virtual environment a huge problem: Conflicts in time budget.

The validity of the model in future depends very strongly from the technical development of the internet. In a world where the internet will be shot down, the model becomes useless. In the opposite scenario the validity remains. It’s even possible, that the virtual world becomes a very big part of the real one, if it isn’t like that already.
4.3 Between Drugs and Dreamlands or About Heroes, Dragons and Heroin

Culture and computer science researcher Mark Butler located in an interview that nowadays the big dreams are not sold by Hollywood anymore. Computer game development companies took this place. Even more, they produce much bigger dreams. The interaction, time pressure, speed and danger create an intersection and an immersion in a story which is not possible just by movies. Culture scientist Hartmut Böhme is discussing in the same direction, but with a different argumentation. In his opinion very old and religious wishes are fulfilled with new technologies: Immortality, passing the limits of space and time and communication over the entire world. In former times such journeys were done by people who stimulated themselves with masks, intoxicants, drums or psychedelic mushrooms. Today a computer and a program code suffice. His conclusion says that computer gamers are a kind of modern shamans which are able to switch between different planes of reality. Hauptmeier (2007, p. 120-128)

These very optimistic views are faced to much more common opinions of addiction specialists and therapists: The internet is highly addictive. Internet addiction is at least in the German language area a well known term. In details experts didn’t find a common sense yet. But generally people who use the web excessively or live a real virtual life show a lot of characteristics of a classical addiction. Other scientists as Schumann (2008) note also a kind of inflation of the term “addiction”. Is it really still a classical addiction? If it would be, eternal love, some daily rituals and a lot of other things could be classified as addiction. His claim is to use the addiction term very cautiously in relation to the internet, because the addiction term could be affected with too much usage by a kind of inflation. This urged by a supply-pull demand which can often be observed in health systems. Secondly, the phenomena internet addiction is very young and not yet fully examined. Neither consensus by psychologists is given about what internet addiction is.

The argumentation below is divided in two parts. First a differentiation between virtual lives and other forms of change as fantasy worlds, television and drugs will be made. Why live in the internet? Why not consume drugs or lose oneself in own
imaginations and dreams to avoid emotional costs or gather emotional benefits? What makes it that difficult for experts to find a common denominator between standard addictions and the internet? Secondly, after the analysis of externalities from virtual lives on a person the case of children will be discussed. The situation is different to the one of adults. Which costs and benefits can a family (children and parents) be faced with? How does the situation alter?

What is the difference between fantasy worlds out of books, movies or just created by the own imagination, a changing reality caused by drugs and virtual lives? First of all, it must be noticed that this is a very general distinction. Different drugs have different impacts and also life in the internet is not always the same. In this essay people playing an avatar are focused on as well as drugs which have a strong impact on the perception on the reality as heroin for example. Drinking a beer is not that strong. Dreamlands generated out of books or movies should also be a stronger case. The aim is to receive comparable situations to virtual lives. The impacts out off the different types should really influence the reality one is living in. Or in other words, a lack of reality should be produced in all different situations.

Again, what is the difference between dreamlands, classical drugs and virtual lives?

Drugs influence perception of reality, things are added and other negated. They can change emotions, feelings and imagination through contained substances. The relation or interaction with other people is usually also influenced on a surreal level. It is not anymore real, because the perception of the acting of fellow men is shaped completely, as well as the reality it is in.

Dreamlands and imaginations generated by own thoughts, books or movies are hermetically closed worlds. Everything imaginable can happen in there and a person itself can influence it more or less corresponding to its wishes. Even more important is the fact that no interaction with other real persons takes place. Everything is created by the person itself or the author.

A virtual life also takes place in a different reality or in a kind of another world with other rules. But neither the perception of the acting of other persons is influenced nor is the own acting. In the drug case a loss off immediate control as well altered
perception is very likely. In a virtual live only the environment is shaped. The acting remains the one of the person. The world is different, but people and their acting does not change!

This is one important reason, why it is still difficult for addiction specialists to classify the internet use as an addiction. Most scientists found the consensus that rather the internet itself is addictive than the contents (as games, pornography or chats). This is because of its features as easy access (low mobility costs), continuous information flow (low information costs) and anonymity (hiding talents and reputation costs). Eichenberger (2008)

But what’s wrong about being rational and seeking for better cost-benefit alternatives? With this argumentation, every person who’s looking for more benefits and avoiding costs in a way which is not yet fully understood and accepted by addiction scientists is an addict! Back is the inflation of the term addiction which would be in a medical sense disastrous with respect to all serious addictions existing. When we use the term addiction related to the web, a person should be addicted to the contents, but surely not to the web as whole! Otherwise rational behaviour could be classified as addictive! The internet is already an integral part of daily life and will become it even more in future. Is every person working with or internet an addict or in serious danger to become addicted? Common argumentations should be reconsidered.

The aim of this essay is surely to outline the benefits of a life in the internet. The costs are already well discussed in public. So the argumentation might be a bit provocative. People becoming really addicted to some contents in the internet cause externalities. Therapies, joblessness and leaving school urge high costs. The general discussion how society, policy and public economic should to deal with virtual lives is following in sections 4.4 and 4.5.

The second remark is about children and young adults, where the responsibility of their development and education is not in own hands, but in the one of the parents. This situation is different because a lot of very important decisions in their lives are still done by their parents. But finally the children are faced with the immediate costs
or benefits of these decisions. Obviously this fact causes a lot of conflicting goals and disputes. Parents want their children to finish school with good marks, children themselves prefer to spend more time within their hobbies. Children, living a kind of a virtual live, usually react very strongly to forbiddance. Parents find themselves in difficult situations. A kind of self-help group was founded already in Switzerland (elternet.ch) which helps parents to deal with such situations. Fortunately, these people did a very precise analysis which lead to similar results as this one does. They help parents to understand the contents of the internet, but also the costs and benefits their own decisions cause to their children. With these approaches on their webpage, good consensus can be found between parents and children. It’s a very good example and should be considered by politicians and addiction scientists. Costs and benefits are taken into account. Rationality takes in a big part of the analysis which is very helpful to find good solutions for parents and children.

Discussion about virtual lives means to take the internet addiction issue into account. But the significant difference between drugs and a life in the internet is the social interaction. Latter is given in a broad range in the web, where drugs alter very strongly behaviour and perception! Dreamlands themselves are also something completely different, where social interaction does not take place at all. Where drugs and dreamlands are a kind of consumption to increase immediate well-being with following costs, a virtual life can be rather characterised as an investment in relationships, where the outcome is not sure. But benefits are possible also in the future when drugs usually just cause costs.

4.4 Policy Implications I: About External Costs, Benefits and Regulations

What can we learn from the analysis of virtual lives? In what way may policy think about it? When costs and benefits change in a situation incentives to do something may cause a different behaviour. For politics the answers to three questions may be important: Who will join a virtual live (RL to VL)? With which costs and benefits is a state or society faced with due to virtual lives (VL to RL)? In what way is a government for people in a virtual life responsible (VL to VL)? The externalities will be analysed and the important question for politics discussed.
Who or which groups in a society will join a virtual life? In the discussion it was clearly shown that a pure virtual life is very dependent from the reasons to join it: status, reputation or talents. Living a certain time of one’s life online with other reasons as fun, job or sports rather tends to a mixture. But similarities are given. In general people with low status in real life might be very attracted by the cost-benefit ratio of this new possibility. Low status is usually linked with bad talents, because talents play an important role in the competition in a league for a positional good. People with a low status are on the bottom of a society. These people have low wages or even no job at all and are dependent on social benefits. The budget of these people is much smaller than the one of the rest of society. So the alternative which is relatively low cost becomes very attractive. Having no job usually causes in the same time a bad reputation, at least in countries in Europe. The incentives, the costs and benefits and finally the situation of people on the bottom of a society (with small income) make the virtual life a considerable alternative. People who have a low budget can be attracted by this occasion, also because it’s evident that the causes of a low budget, low status, bad talents and perhaps also bad reputation are often related. These persons suffer from the discussed disadvantages while people usually in the upper classes of a society don’t. Additionally people with a higher income can also make changes in reality where the costs are much higher than by moving into a virtual life.

With which costs and benefits is a state or society faced urged by virtual lives? This question corresponds mostly to a movement from a life in the internet back into reality. People who live fully in the internet and don’t earn money from a job need still money to live, or let’s say to feed their bodies in the real world while living elsewhere. Usually this ends in costs for social benefit systems because these people are not productive anymore in reality. When we observe the income of a person over an entire life, the earlier a person starts a virtual life the bigger is the loss through the lack of further income (under the assumption of no return to reality). Especially when conflicting goals between internet and education emerge the loss of future income can increase significantly, because the wage in the future will be even smaller.
At first glance virtual lives are not costless for a society. Especially when a child misses its education or a young person stops living in reality the cost is high through a lack of future productivity which causes less taxes, consumption and perhaps even costs for social benefit. At a progressive age these costs decrease. The graph is concave under the assumption that during a life income increases. If the person returns to reality, the lack of income is illustrated by the axis intercept from entrance until return. A society has to redistribute from people with no virtual life to others with one.

But what is when a person already has no job and perspectives are very bad to get a new one? The benefits spent by a virtual life to this person cause no additional costs to a society. This situation is Pareto optimal for society and person. While a society should be very interested keeping a child in real life or take it back to one, a very old person or one with a generally low expected future income is less relevant on a financial point of view. The question for politics is how many money should be redistributed finally from people in a real to the ones in a virtual life. The decision is dependent on the lack of future income and the costs from state benefits.
One should also consider that as illustrated a life in the internet can increase and also alter real life welfare of people. Perhaps the love of the life was found, self-esteem and ambition awake or one can compensate his bad status in reality with a better one in a not pure form of a virtual life. This is all very nice and touching, but finally it does not spend any benefits in monetary terms to society. So it will probably not be considered in decisions by purely rational people. Even if a person receives new talents which could be useful, a society probably does not take them in account. One of the rare things which can spend benefits to the community is that a virtual life can be a kind of substitute program for social reintegration, which basically has the same incentives: generating social networks and contacts. General welfare is increased by avoiding the emotional cost and gathering benefits, but a society does not really recognise them in monetary terms.

In what way a government even is responsible for people in a virtual life? The last part concerns people in a virtual life or between virtual lives. The question which is very strongly linked to the latter is: Does a government actually accept the existence of virtual lives? If not, it probably tries to avoid them as this the Chinese government intensively does through regulating the whole internet. If it does, how large should the influence be? States usually have the problem that if they accept the web, the international character makes it relatively difficult to influence the people with different policies. Therefore if one asks if a government should regulate the attendant question is: Which government? The costs to implement law in virtual space are huge and internet crime is not easy to control. The easiest and cheapest way is to regulate the remaining real life of a person. A government can change the incentives via costs and benefits, perhaps over social benefits.

But how can the state regulate virtual lives at all? Education of parents and children seems to be the way to go as discussed in section 4.3 in the second part. It prepares children and young adults to be capable handling the possibilities but also dangers of the virtual world. Besides the institutions which emerges themselves as elternet.ch also school has there its tasks to do. But like this not all negative externalities can be avoided and surely not all sources of them influenced or destroyed appropriately. As example may so called school shooters serve. They find
themselves not in reality but are able to express, communicate and exchange over the web. The unpleasant externality has to be a concern of governments. Generally the creation of groups or sub cults in the internet will probably become a serious issue to deal with which cannot be negated fully by education. The education and the social system where those individuals live in is the cause for their actions. So there are limits for the market because these people suffer from problems as status, reputation, talents or a lack of emotional revenues. The market mechanism to minimise their suffering is exactly offered by a virtual life as discussed. But as shown by examples in the past these people are already full of hatred when they enter the virtual life and don’t look anymore for benefits. They just seek revenge or want to destroy. So shooter games are perhaps not as often considered the cause for school shootings but rather prevention or a place where negative emotions can be discharged.

I think these externalities which are supported by the internet cannot be avoided by a natural or market mechanism itself. As long the hate remains in the internet there is no further problem. But as soon an action in reality occur (RL to VL to RL) the outcome is very negative. Police and secret service (as part of the government) have to investigate these platforms. When a young adult finds access it should be no problem for a government organisation. So far no self regulation market mechanism (besides a virtual life) seems to be capable of handling these particular issues.

A final remark is about what we can learn from virtual societies. People living in the internet usually live already in communities, with given rules and structures. But they also suffer from externalities and other market failures. Very nice examples can be provided out of the world of the Second Life. This is a very real simulation of the reality, and as discussed, a first step in direction to a metaverse.

In Second Life Axel, a sales manager in real life, created his own small village called Sternberg. Because it is very idyllic and charming other players moved in with their avatars. They agreed on norms, rules and created an own small community. But they are faced with big externalities. The neighbor of Sternberg is a big porn shopping mall. Besides that customers in strange, black leather dresses accidentally
visit Sternberg, the big conventions regularly urge huge lags and server crashes, because too much people are in the area of the shopping mall and Sternberg. The city council decided that the mall must disappear. Negotiations with the boss of the mall remained without result, because in Second Life everyone can do whatever he or she likes on and with own property. As reaction to the negative result the city council decided to organise themselves big events to block the servers from the mall. Hauptmeier (2007, p. 123)

So as in the examples societies in the web often work very similar to real ones. They are faced with problems of collective action, externalities and much more public choice theory may help but also learn. Virtual societies could serve very well as a kind of laboratory to test different policies. This has already been done for example in World of Warcraft, an online game, to test the behaviour of people when a big disease is coming into a city. Also imaginable can be that economic theory learns new solutions for given problems. The solution of the citizens of Sternberg is not very beautiful or new, but it’s very imaginable that new ones emerge. Virtual communities can also help to understand how norms and rules in societies emerge.

Again, in what way is a government responsible for people in a virtual life? Finally the state has often no tasks to regulate a virtual life, because in most cases the provider of the world already creates the rules. The role of the state is to regulate the web as whole object and if necessary the providers of the virtual world. The government can alter behaviour via influencing incentives through changing costs and benefits for users and providers.

The impacts for politics are following:

1. People on the bottom of a society with low status and small budget have strong reasons to join a virtual life. Also suffering from a lack of emotional benefits and talents may be compensated by a virtual life.

2. A society is faced to costs of a lack of future income as well social benefits may have to be paid for people returning from virtual to real life. It’s basically the anchor for political decisions. But also benefits as new talents and keeping
people at least in some social networks should be taken in account and can avoid social costs.

3. A government can and has to regulate the internet, but not virtual lives themselves. Rules of the provider or different groups own rules already regulate. The government can change in real life incentives of persons and providers via changing costs and benefits. The main tool to do so is a good education for internet issues.

4. A big problem seems to be also which government is responsible because of the very international character of the internet. A government itself has to estimate negative externalities which are possibly damaging their country and intervene. Governments have to consider in their actions generally lacks of future income but also take problems with internet sub cults as school shooters into account. In the latter case a change of incentives through costs and benefits have no effects anymore.

4.5 Policy Implications II: About Compensation and Redistribution

Do we have to regulate virtual lives? The whole discussion held over the thesis moves between costs and benefits of virtual lives for a person itself but also for the society as a whole. As in the past section discussed an important measurement if regulations are required is the relation between costs and benefits or externalities for society. The alternative to regulations is to let the market play, so believe in the self-regulating power also called the invisible hand. The final question discussed is if a government in general has to intervene or not?4

When government decides how to deal with virtual lives costs and benefits for society are important. The costs and benefits of a single person do not play a very important role anymore. Where costs from addiction therapies or lost incomes are estimable and relevant, benefits are not obvious on a first glance. But as discussed a society might also join benefits from a kind of social stabilisation of people who

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4 As already discussed for sub cults and criminality causing negative externalities on society a government has to intervene. This final discussion concerns basically about the right of a person to join basically a virtual life and cause so indirectly externalities (as a lack of income or productivity).
can interact with other people in a very low cost way, when alternatives are very expensive. For example Jason with his disabilities describes very well where he gets benefits, which would be very expensive if a person would have to help him whole day to come around. This is surely an extreme example, but same kinds of benefits are received by a person who would otherwise not anymore go out to meet other people.

While the step into the web is not very problematic for an individual in terms of costs, a society suffers as shown from losses of productivity. On the other hand the step back into reality might be very expensive for the individual. And society has to pay eventually some social programs to help. This is the very negative perspective. But it’s also possible that a person returning from a virtual life does not suffer anymore from emotional cost and is much more productive or perhaps other problems of this person which could cause much more costs can be avoided. For example a sad and disillusioned person who met the love of his life in the internet suddenly becomes happy and does not start to drink instead. An addicted online player has perhaps a disposition to lose himself in different worlds. But we can also agree that a detoxification of serious drugs (which he or she would take instead) is very expensive. This sounds perhaps disrespectful and withdrawn. But the issue is analysed by benefits and cost for society, so these points should be considered. Anyway, community is faced to externalities out of virtual lives.

Where externalities emerge usually market failure is given. The state should intervene and regulate as standard economic theory proposes as for example in retirement provisions, insurances and generally most public goods. The other alternative is to let the powers of market play and commit on long-term self regulation. This means that institutions emerge themselves as the example where parents create a forum to understand what their children are doing and provide strategies to solve the problems.

This approach is not able to say if regulation is required or not. The first conclusion is that institutions dealing with virtual lives should keep in mind that not just addiction or other mental disruptions cause the emergence. Often a big part of reason may be in. To all these costs for the individual person and society real benefits exist.
Common discussions as well as experts tend to close their eyes confronted with this fact. A rational person tries to gather benefits and avoids losing them. If they are denoted as addicted or disturbed, the situation becomes obviously difficult. An optimal policy to regulate virtual lives would be the one which could keep the benefits out of movements from real to virtual life and vice versa and prevents from costs for person and society. This optimum is hard to achieve, so it will be sufficient for a first step to keep in mind that virtual lives may spend benefits to members of the community. A further huge benefit of virtual lives is the demand for computer and internet services which has already a huge impact on entertainment industry. It’s well imaginable that these effects will become much larger in future. But I estimate that compared to the emotional benefits virtual lives spend these effects for the entertainment industry remain marginal.

Second conclusion is the redistributive or better compensating effect of virtual lives. According to the theory of status virtual lives are part of the redistribution. People with a low status, talents and so on in reality become compensated. It’s probably a very cheap compensation compared with the benefits created for these persons!

When a government acts rational it should estimate costs and benefits out of every alternative from non regulation up to forbiddance of virtual lives. The alternative with the best cost benefit relation (for the state) should be chosen. If the government is interested in the welfare of its people, it must also face the social cost to the personal benefits and vice versa. Afterwards it will be a question of redistribution and compensation which has to be answered by politics. But as mentioned, especially in the status case, costs are low and benefits out of the compensation huge.

In addition to the alternative “no regulations by the government” it should be considered that institutions to avoid negative externalities may emerge by themselves. They might also emerge in the internet which is a very fertile ground for new inventions. A last question remains: How important will this issue be in the future or has a government to care about it yet? Actually Swiss government estimates costs of other externalities much higher so that they actually don’t deal with virtual lives as written by Eichenberger (2008). Perhaps in future this will
change. But it leads to the final conclusion that social costs still seem acceptable. A very low price for the benefits a virtual life may spend to a person and a society as whole.
5 Conclusion: Cruel Reason?

When does it become reasonable to lose oneself in the internet? This question was answered in three steps by following the structure of the thesis.

First, it is essentially important to have an understanding of emotions within economic theory. Based on Elster and Frank emotions can be included very generally spoken in a cost-benefit framework through valence, strategic issues, reputation and status. This approach can help to find good explanations in completely different issues. Especially the status theory of Frank is great in expressiveness on questions of distribution and compensation in a certain society. But the most important conclusion is as simple it may seem that emotions can cause cost as well they spend benefits.

Secondly, the analysis clearly showed that beside the well known costs of virtual lives also benefits exist. Especially when a person joins a virtual life out of motivations as talent changing, status or reputation resets benefits can be huge. In such situations a virtual life will become very reasonable in terms of costs and benefits. If this rationality is not considered in public discussions implications a lot of benefits could be destroyed. The model does not beautify virtual lives. The costs which can emerge are also fully included as summarised under losing oneself between virtual lives and the return in a real life. The central suit is that costs and benefits are judged and valued with no normative intent behind.

Finally, virtual lives cause externalities. Where costs are very quickly revealed by a lack of future incomes, social costs and perhaps therapies, benefits are not that obvious at first sight. But by including the status issue in economic theory it can be clearly shown that people who join a virtual life might increase own local status while they remain the low status people for the rest. As result a nearly Pareto optimal situation can be achieved. But what policy decides is up to each country itself. It remains a question of redistribution and compensation.

I'm aware of the facts that this thesis is quite provocative, not always following standard economic methods and also influenced by speculations about the future. But by regarding the increasing significance of the internet in daily life as well as how much people care about redistribution and compensation I'm convinced that
this issue will become relevant for public economics and policy. I hope my thoughts add helpful insights for future decisions but also some provocation by conceding a certain amount of reason to virtual lives in direction to standard opinions.
References

A. Scientific Articles and Books


B. Literature and Journalism


C. Internet


