

Tom Krueger

# Microeconomics and Exegesis

Version 2



*For Michaela*

Tom Krueger

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# 1 Introduction

Religion is one of the most important cultural achievements of mankind. Religious ideas can be found in human societies at all times and in all places. Their roots go back to the time before human settlement. Religious content manifests itself in stories and rituals whose meanings are not usually directly accessible to the human mind. A particular problem for human reasoning is the fact that the various religions proclaim matters and events as truths that often contradict each other or scientific findings. Several creation myths illustrate this. In Christianity, the world and humanity were created by God in seven days. In the Babylonian creation myth, the *Enuma Elish*, the god Marduk creates the world and man from the body of the monster Tiamat, which he had previously defeated in a fight.<sup>1</sup> Finally, in an Indian creation myth, the gods Vishnu and Brahma form the world from their bodies.<sup>2</sup> It is obvious that these different versions of creation cannot all simultaneously be true. Furthermore, none of these creation myths are compatible with the scientific findings on the origin of the universe. Insights from biology, geology, and astrophysics show that the world was not created only a few thousand years ago but is already several billion years old. Likewise, science proves that humans are not the product of a divine act of creation, but that they have developed from other living beings over millions of years. These findings are contrary to the creation myth in the Bible and the creation myths of other religions. In addition, to this day, there is no scientifically documented example of divine activity in the world. Such contradictions are central to the problem of a rational understanding of religious ideas.

Therefore, the question of the meaning of religion can only be answered if it is possible to make religious content rationally



accessible by means of appropriate interpretation methods. The description of one such interpretation method is the subject of this book. The method used here is based on the instruments of economics. This is a new approach because it connects two areas – economics and religion – that usually have nothing to do with each other. At an initial glance, only the contrasts between these areas seem obvious. Economics deals primarily with material matters, such as the prices of goods, corporate profits, costs, and consumption quantities. On the other hand, religion often calls for material renunciation; i.e., it is about humanity and love, things that have nothing to do with money and other material values. So, what can economics contribute to the understanding of religious content?

The answer to this question can be found in the similarities between religion and economics. Religion is basically about human happiness. One example is the biblical story of a lost paradise, which refers to an imaginary state of human happiness. Another example is God-given punishments and rewards, which also impact human well-being. Furthermore, many religions offer their followers the prospect of a future state that is equated with immeasurable happiness. Thus, human happiness plays a central role in religion. This is precisely the point of its relationship with economics. After all, economics, or more precisely microeconomics, is also concerned with human well-being.

Microeconomic theory uses abstract models to describe the relationship between people's needs and their buying and consumption behavior. According to this theory, every consumer behavior leads to an increase in benefits and happiness. The pursuit of happiness is the driving force behind people's economic behavior. Classical microeconomic models have traditionally only been used to describe purely economic behavior, such as the purchase of goods. Since the middle of the 20th century, however, microeconomics has increasingly been applied to areas that go beyond mere purchasing

decisions. For example, microeconomic models have been developed to explain social phenomena, such as discrimination, marriage behavior, or criminal activity.<sup>3</sup>

The model presented in this book goes one step further. It can be used as a *universal* explanatory model for human behavior in all areas of life. In addition, the model describes a mental state that can be interpreted as *absolute happiness*. The formal conditions of this state form the basis for building a bridge with religion. This is because religion does not offer the prospect of arbitrary happiness to man but immeasurable, absolute happiness, as mentioned above. The model thus enables a rational view of the state of absolute happiness and forms the starting point for interpreting religious stories.<sup>4</sup> The application of microeconomic exegesis offers two prospects. On the one hand, it leads to a rational understanding of religious content. On the other hand, it provides a perspective for understanding the meaning of religion in general, and thus an approach for resolving the conflict between faith and reason.

In Chapter 2, the microeconomic model is developed based on a universal human behavior model. This behavioral model can be called *homo agens* because it is based on the *entire* realm of human action. It differs from the stricter model of *homo economicus* used in traditional microeconomics. The *homo agens* model assumes that every human action is caused by triggering needs. It thus describes not only – as in traditional microeconomics – particular areas of action but all areas of activity. This is where its universality lies. In addition, the model enables the description of needs and actions aimed at changing the structure of needs itself, i.e., the preferences of a person. Such needs are directed toward the inside of the human psyche and not the outside world. These inwardly directed needs have, thus far, been completely ignored in traditional microeconomic models because *homo economicus* is assumed to have a constant

structure of needs (preference structure). However, the homo agens model allows the derivation of conditions for a state of absolute happiness from the changeability of human needs. This state is the basis for the development of the microeconomic interpretation method.<sup>5</sup>

In Chapter 3, the microeconomic interpretation method is applied to religious texts. Section 3.1 illustrates the basic principle of microeconomic exegesis using the Heracles myth as an example. In this context, it is particularly important that myths and religious texts have constant structural characteristics; i.e., they are structured according to a certain scheme. This scheme was described by the mythologist Joseph Campbell (1904–1987) and is termed the *monomyth*. The characteristics of the monomyth can be assigned to certain aspects of the need structure described in Chapter 2. The connection between the monomyth and the need structure can be used to interpret religious texts. Sections 3.2 to 3.7 apply the microeconomic interpretation method to selected texts from six world religions. Of these, three religions – Judaism, Christianity, and Islam – arise from Western culture and three religions – Hinduism, Buddhism, and Daoism – from Eastern culture.<sup>6</sup>

In Chapter 4, the microeconomic interpretation method is applied to particular forms of religious rituals. Here, the focus is on two important ritual categories. One category is the rites of passage, which can be found in practically all religions. Rites of passage have the same structural characteristics as the monomyth, which is why the microeconomic interpretation method can be easily applied to this type of ritual. The second ritual category includes sacrificial rituals, which are, or were, also a central part of many religions. The examples provided show that sacrificial rituals have common structural characteristics that can be interpreted using microeconomics.

The selected examples represent only a small part of the total religious content. However, the descriptions clearly show that the microeconomic exegesis can also be applied to further content from the above-mentioned or even other religions.

Chapter 5 uses the insights gained in the previous chapters to develop an explanatory approach to the emergence of and change in religious beliefs. It will become apparent that religious ideas can be interpreted as intuitively generated symbols that represent elementary characteristics in the human need structure. The microeconomic interpretation method and its underlying model, on the other hand, provide a corresponding rational perspective on the characteristics of the need structure. Religious beliefs and the microeconomic homo agens model thus prove to be two sides of human self-awareness, where religion represents the intuitive side and the microeconomic model the rational side. This perspective provides a solution to the conflict between faith and reason.

Selected topics are examined in more detail in the appendices. Appendix A provides further details on the integration of the model presented in Chapter 2 into current microeconomic theory. Section A.1 explains the formal conditions of homo agens and compares them with different variants of homo economicus. The aspects that limit the meaningfulness of models based on the rigid assumptions of homo economicus are highlighted in this section. At the same time, the suitability of homo agens as a universal model of human behavior is illustrated. Section A.2 outlines human decision-making behavior based on the homo agens model. Thereby, findings from the newest branches of microeconomics are considered, namely behavioral economics and neuroeconomics. In addition, results from neuroscience, motivational psychology, and emotional psychology are employed. The decision model uses selected examples to illustrate the situational character of human decisionmaking

behavior. Section A.3 explains some empirical methods that can be used to identify human needs and their impact. The description shows the possibilities and limitations of current methods and provides perspectives for future research activities. Section A.4 specifies and extends the microeconomic model developed in Chapter 2. This extension illustrates the formal connection between the consumption of goods and human happiness. Through this extension, the model can be applied to the problems of traditional microeconomics, such as the purchase of goods. Moreover, this section explains the significance of the scale of utility, which is used to describe the state of absolute happiness defined in Chapter 2. For this purpose, the scale of utility of the homo agens model is compared with other possible scales of utility. Finally, Section A.5 compares the homo agens model with traditional models in the economics of religion. These include microeconomic approaches that are intended to describe and explain religious behavior. The homo agens model differs from these approaches in its ability to interpret religious content and thus explain the emergence and existence of religious needs.

Appendix B illustrates the microeconomic interpretation method by providing further examples. Section B.1 presents a microeconomic interpretation of the Oedipus myth. The Oedipus myth has a long history of interpretation that makes it possible to compare microeconomic exegesis with other interpretation methods. Here, microeconomic exegesis is compared with the psychological interpretation of Sigmund Freud (1856–1939) and the structuralist approach of Claude Lévi-Strauss (1908–2009). Microeconomic exegesis can be applied not only to religious texts but also to profane ones. As an example, the fairy tale *Cinderella* is interpreted in Section B.2. In addition, the structural features of the monomyth are compared with the scheme of the Russian philologist Vladimir Propp (1895–1970), which is based on an investigation of the plot

structure of fairy tales. Section B.3, with its interpretation of Shakespeare's tragedy *Romeo and Juliet*, is a detour into the realm of world literature. These two examples from profane literature – fairy tale and tragedy – illustrate the manifold possibilities for expressing the monomythic structure. Section B.4 looks at the Toltec myth of Quetzalcoatl, a story from Central American culture, which had no connection to Europe or Asia at the time the myth was created. This example supports the hypothesis that the creation of stories with the same structural features is not based on culturally acquired characteristics but on inherited, fundamental human characteristics. Section B.5 provides a microeconomic interpretation of the Christian Trinity, one of the most mysterious and contradictory religious symbols. The example shows that the microeconomic interpretation method can be used not only to interpret text passages but also to interpret single symbols.

Appendix C examines the relationship between religion and morality, which are often closely related. Section C.1 looks at morality as a component of religious symbolism. One of the questions at stake here is whether religion is a necessary precondition for moral action. As an example, the biblical story of the Good Samaritan is given a microeconomic interpretation. Section C.2 deals with the theodicy problem from a microeconomic point of view, i.e., the justification of God in the face of suffering in the world. Here, the microeconomic perspective is compared with traditional explanatory approaches.

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<sup>1</sup> Cf. Eliade, M. (1959, reprinted 2002), pp. 128–129.

<sup>2</sup> Cf. Michaels, A. (1998, reprinted 2012), p. 329.

<sup>3</sup> The works of Gary S. Becker are specifically to be mentioned here, cf. Becker, G. S. (1993b).

<sup>4</sup> In sociology and economics, there are models for describing religious behavior and the economic effects of religion (*economics of religion*), cf. Iannaccone, L. R. (1998). However, these models cannot be used to interpret religious *content* and do not explain why religion exists and how it relates to reason.

- 5 Many explanations in Chapters 2 and 3, as well as in Appendices A and C, have been taken from my book *Bedürfnis, Glück und Religion* (2006) without modification or special reference.
- 6 For a better understanding of the examples used, basic knowledge of the religions concerned is helpful. This knowledge can be gained by reading introductory literature on world religions. The book *The World's Religions* (2009) by Huston Smith offers a good overview.

## 2 The Relationship between Need and Happiness

### 2.1 Satisfaction of Needs as a Cause of Human Action

Every event – and thus every action – has a cause. There is no such thing as an unfounded act. Needs can be seen as the cause of human actions. A need can be defined as a feeling of lack that can be eliminated by action. For example, food intake is based on a need for food, and meeting with friends satisfies the need for social contact.

Table 2-1 lists some human needs and possible actions for their satisfaction.

Need	Action/Omission
Social recognition	<ul style="list-style-type: none"><li>– Social commitment (e.g., in an organization)</li><li>– Use of status symbols (e.g., luxury cars)</li></ul>
Need for entertainment	<ul style="list-style-type: none"><li>– Theater visit</li><li>– Reading</li><li>– Sports</li></ul>
Need for security	<ul style="list-style-type: none"><li>– Avoidance of dangerous situations</li><li>– Installation of alarm systems in apartment or house</li></ul>

Table 2-1: Needs and possible actions or omissions

Table 2-1 shows that human needs can trigger a variety of actions. There is a general connection between need and action; i.e., an



action always serves to satisfy needs. In this context, an action is always understood as a conscious activity. Pure bodily functions, such as the heart beating, are thus not considered actions, even though, as with conscious movements, muscle contractions occur. Likewise, reflexes, such as the hamstring reflex, are not considered actions because they cannot be consciously controlled. In general, actions can be defined as motivated behavior.

In current theories of human behavior, there is no uniform term for the triggering of an action. Terms such as need, desire, motivation, or excitement are used without a clear definition of whether these terms are used synonymously or not.<sup>7</sup> In this book, these terms are generally referred to as *needs*. In the same way, colloquial terms, such as *wants*, *will*, or *goals*, fall under the concept of need, as do the technical terms *preference* and *motive*, which are often used in economics and psychology.

A need can be understood as the equivalent of energy potential in physics. A person performs an action only when there is a suitable need, just as current only flows through a conductor when it has a voltage source, or an object only falls when it is at a certain height.<sup>8</sup> Every potential tends to degrade itself. In the case of a falling object, its potential energy is converted into kinetic energy, i.e., the original potential – the potential energy – dissipates. As an analogy, a person reduces their needs, i.e., their feeling of lack, through their actions. As a result, the feeling is no longer present after the action or is present to a lesser extent.<sup>9</sup>

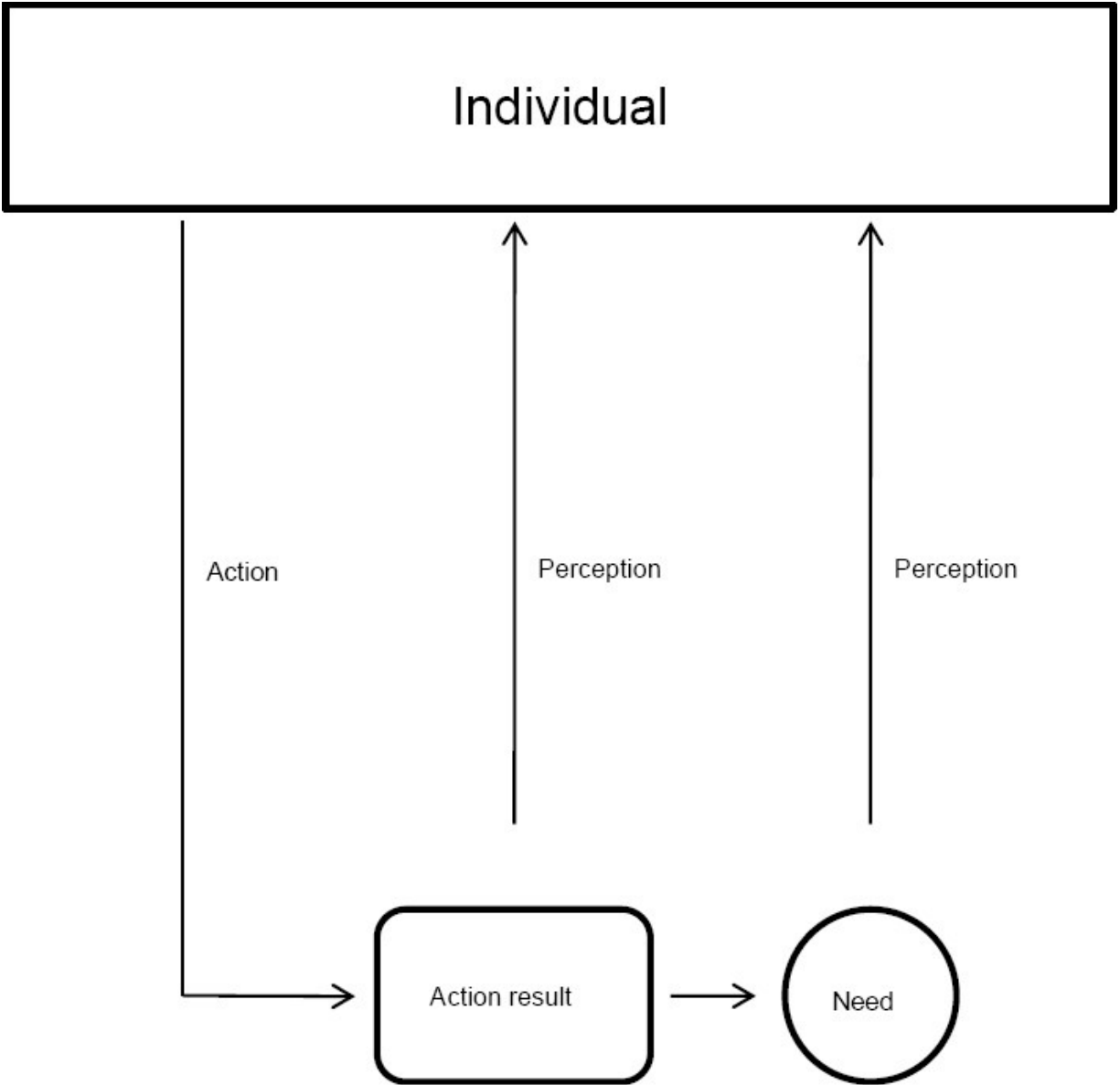


Figure 2-1: Control cycle of need satisfaction

On the one hand, people experience the satisfaction of their needs as feelings of happiness, i.e., as feelings of contentment or euphoria. However, since the feeling of deficiency is often accompanied by negative emotions, an action could merely result in a reduction of those negative feelings. For example, if you step barefoot on a pointed object, you will feel pain and pull your foot back to reduce the pain. Actions, therefore, either result in an increase in positive

feelings, a decrease in negative feelings, or both. In all cases, the level of happiness after the action is higher than it was before the action; i.e., the action always leads to an increase in happiness.

The relationship between needs, actions, and happiness can be described as a control cycle, as shown in Figure 2-1.

The control cycle begins with the perception of a need by the individual. The need is perceived as a feeling of lack, such as hunger. The individual then performs a sequence of actions to satisfy the need. In our example, the sequence of actions for *eating* is appropriate for satisfying the need. The sequence of actions includes all activities that belong to eating. These comprise all bodily movements that are necessary for food intake; i.e., the food is fed to the mouth, chewed, and swallowed. Usually, the food must first be prepared, which is also part of the action sequence. Thus, an action does not always consist of simple movements but can include a complex sequence of activities. This is usually the case with human actions.

The action has a result. The basic consequence of food intake is the onset of a feeling of satiety. The hunger, i.e., the negative sensation, decreases. However, food can also cause feelings of happiness in the form of positive sensations. These can be conveyed, for example, by the taste of the food. Thus, the happiness increase is greater if the preference for the respective dish is higher. The greatest feeling of happiness will therefore arise when you eat your favorite dish. But food intake is a cyclical process. When the food has been consumed by the body, the need arises anew, and this then leads to a renewed performance of the action.

The entire process takes place repeatedly. The individual constantly perceives certain needs; they then act and register the result of the action as an increase in the feeling of happiness. This control cycle

is, of course, a simplified scheme that illustrates the process of satisfying needs. Reality is far more complex. Thus, actions can be influenced by several needs. For example, if you decide to eat in a restaurant, the choice of the restaurant may depend not only on the quality of food but on the ambience as well. However, the ambience has nothing to do with reducing the feeling of hunger; rather, it satisfies other needs.

Nevertheless, the control cycle in Figure 2-1 illustrates the principle of satisfying needs because every action is part of such a control cycle. Based on the insight that humans have many different needs, the human need structure can be represented graphically as follows (Figure 2-2).

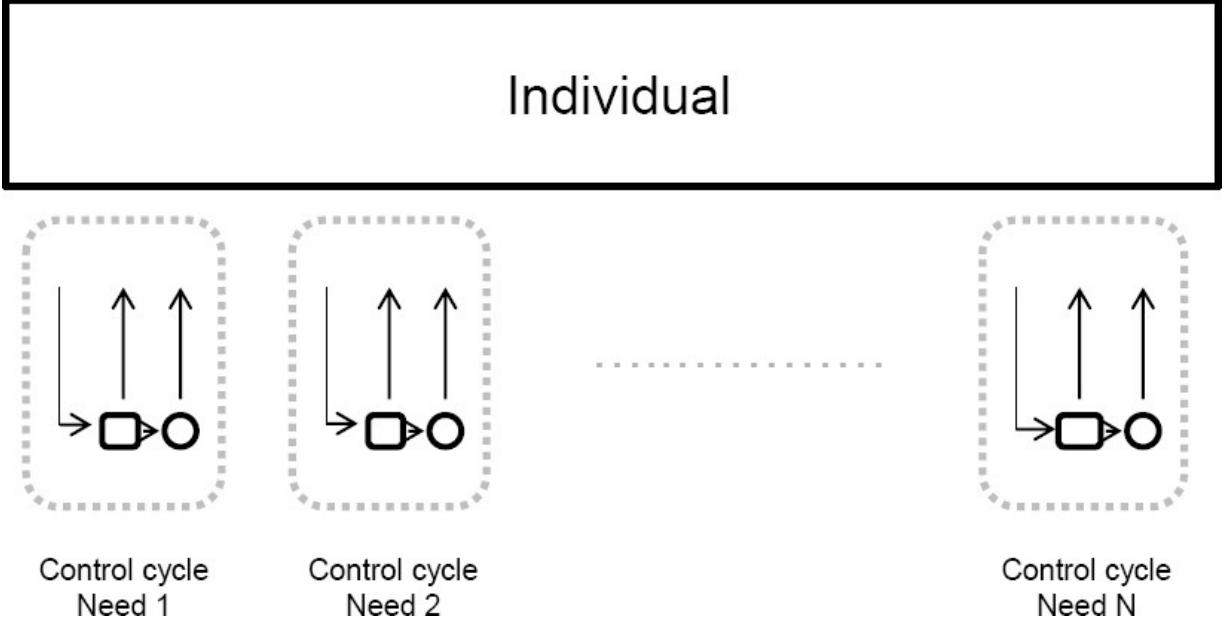


Figure 2-2: Scheme of the human need structure

In the following sections, I discuss some basic characteristics of needs and then present a microeconomic model to describe the structure of needs. Rather than the term *happiness*, I refer primarily to the term *utility* since this term is generally used in

microeconomics. However, the terms *utility* and *happiness* are used interchangeably in this book.

## 2.2 Characteristics of Needs

Human needs are not equally important but can be divided into more and less important needs. In times of food shortages, the next meal is certainly more important than the next visit to the cinema. When human needs are arranged in the order of their importance, one gets a hierarchical scheme that can be used for classification purposes. The American psychologist Abraham H. Maslow (1908–1970) proposed a hierarchical classification of needs that is still used today. Table 2-2 shows an extract from Maslow’s hierarchy of needs.<sup>10</sup>

Needs with a high priority, such as hunger or thirst, are called basic needs. According to Maslow, people always try to satisfy their basic needs first. Only thereafter do they devote themselves to satisfying secondary needs.<sup>11</sup> This is also the reason why self-realization needs exist primarily in societies where basic needs can be met to a high degree due to material prosperity. Basic needs then fade into the background, paving the way for the emergence and satisfaction of secondary needs.

Need Type	Examples
Physiological needs	<ul style="list-style-type: none"><li>– Hunger</li><li>– Thirst</li><li>– Need for health</li><li>– Fatigue</li><li>– Sexuality</li></ul>
Need for security	Need for: <ul style="list-style-type: none"><li>– Stability</li></ul>

	<ul style="list-style-type: none"> <li>- Law</li> <li>- Freedom from anxiety</li> </ul>
Social needs	Need for: <ul style="list-style-type: none"> <li>- Affection and love of other people</li> <li>- Esteem</li> </ul>
Self-actualization needs	Need for: <ul style="list-style-type: none"> <li>- Music and art</li> <li>- Knowledge acquisition</li> </ul>

Table 2-2: Types of needs and concrete examples

Such a hierarchy of needs, however, only allows a static description of the importance of individual needs. If the satisfaction of basic needs causes these needs to recede into the background and make room for subordinate needs, the importance of the needs within the hierarchy must be subject to temporal fluctuations that depend, among other things, on the satisfaction ratio of other needs. Hence, needs are not of constant importance for people, and their weighting can change over time.<sup>12</sup> Thus, one can distinguish between long-term and short-term fluctuations in this significance. Long-term fluctuations develop over months or years, and short-term fluctuations over minutes or hours. Long-term changes in the hierarchy of needs can often be attributed to a change in the weighting of needs, whereas short-term fluctuations are more likely to result from a shift in human attention.

Fashion trends in the apparel industry can be seen as an example of long-term changes in needs weighting. For example, in the 1970s, platform shoes enjoyed great popularity. This trend continued for several years and then receded. About 30 years later, this trend was

created anew. Even the current retro look of cars or electrical appliances can be interpreted as an expression of a weight shift.

A distinction should be made between long-term fluctuations in the weighting of needs and short-term changes in the hierarchy of needs. These short-term changes are usually based on the fact that the degree to which individual needs are met changes within a few minutes or hours. As an example, imagine that you want to spend a nice evening with your partner. You may have reserved a table in a fine restaurant and bought tickets for the cinema or theater. You are feeling good all around. However, during dinner, you suddenly get a severe toothache. You will likely try to obtain painkillers and may even go to the dentist; i.e., you will change your original intention. The arrangement of the evening served in the broadest sense to satisfy the need for entertainment. The appearance of a toothache, however, brought the basic need for health and integrity to the fore. At the beginning of the evening, this need had a high satisfaction ratio and was not within your perception area. The occurrence of the toothache reduced the satisfaction ratio of the need for health, which then entered the perception area as a result. Because the need for health has a high weighting, actions are now determined by this need, and pain relief is sought. Figure 2-3 schematically depicts this shift in attention. The oval frame indicates the needs in the area of perception.

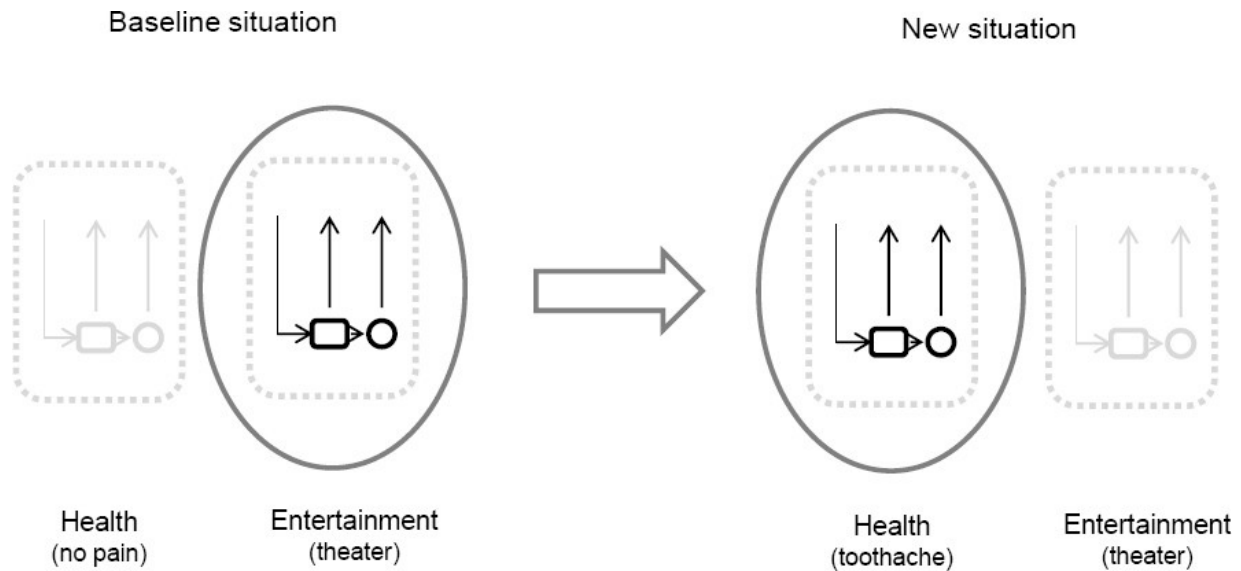


Figure 2-3: Shift of attention with decreasing satisfaction ratio

A person tends to be more attentive to needs with a low satisfaction ratio than to needs with a high satisfaction ratio. This leads to the fact that needs with a high satisfaction ratio often recede into the background.<sup>13</sup>

This is evidenced by the cultural history of mankind, which over the last 10,000 years has evolved from an agricultural society into a modern industrial society. The technical progress associated with this development has significantly increased humanity's ability to satisfy its needs. Think of the advantages that have arisen from the use of electrical energy. At the same time, however, the number of needs has significantly increased. Today, when we visit a museum in which former living conditions of people are depicted, we quickly realize what we would miss in that situation. The living conditions of the past often seem primitive to us today, although they were normal for the people living at that time. Which inhabitant of an industrial nation can imagine life without electricity, refrigerators, washing machines, or sanitary facilities? Yet this was perfectly normal in Europe at the end of the 19th century. Our astonishment can be



explained by the fact that we evaluate the simpler living conditions of that time from the perspective of our current structure of needs. We recognize that many of our current needs could not be adequately met by the means available in the 19th century.

However, not every need with a low satisfaction ratio inevitably reaches the human perception area. An example of this is the spontaneous decision to go on holiday to a particular place. Such spontaneous decisions can be triggered, e.g., by a newspaper report on the specific holiday destination, i.e., by a situation-related influencing factor. The need had a low satisfaction ratio before the triggering event and did not enter the perception area. The focus on the holiday destination was only generated by the newspaper report and was associated with the need for relaxation and thus entered the perception area. Especially, in the case of subordinate needs, a focus can be triggered by certain situations, such as reading a newspaper report. The situational significance of a need thus also depends on the perception of its satisfaction ratio.<sup>14</sup>

### **2.3 The Relationship between Need and Happiness**

As already mentioned in Section 2.1, the satisfaction of needs leads to an increase in happiness and utility. However, the growth rate of utility is not independent of the consumption quantity of a good, but the rate decreases with increasing consumption. This means that the increased consumption of a good leads to a saturation effect. If a person has not eaten for a long time, they are likely to throw themselves greedily at an offered slice of bread. The second slice will probably still taste good and increase their utility, but the utility increase may be a little smaller than with the first slice. If you continue the game in this way, each additional slice of bread means a smaller increase in utility. There is – also literally – a saturation effect here. If you continue to eat anyway, you may feel sick, which

corresponds to a reduction in utility. In this case, each additional slice of bread would have a negative utility increase; i.e., nausea would increase, and utility would decrease. In microeconomic theory, the increase in utility resulting from an arbitrarily small increase in the consumption quantity of a good is referred to as marginal utility. In our example, each additional slice of bread has an ever-smaller increase in utility. In economics, this is known as the *principle of diminishing marginal utility*.<sup>15</sup>

The principle of diminishing marginal utility can be further illustrated by the example of a lottery prize. Imagine you win \$1,000 in a lottery. You are likely to be very happy with this prize because you can use the \$1,000 for shopping, i.e., to satisfy certain needs. The lottery win leads to an increase in happiness. It depends on your personal need structure how strong this increase in happiness is. However, if you win \$1 million in the lottery, your increase in happiness will be significantly higher because you can fulfill considerably more wishes with \$1 million than with \$1,000. The additional \$999,000 thus has a significant influence on perceived happiness.

Now, imagine you win \$100 million in the lottery in the first case and \$101 million in the second. The prize of \$100 million will again mean a clear increase in happiness, whereas the increase from the prize of \$101 million will probably not be much different. This is because, with \$100 million you have basically the same possibilities as with \$101 million. Although, in this case, the difference is \$1 million, and thus even larger than in the first example, the increase in happiness is only marginal.

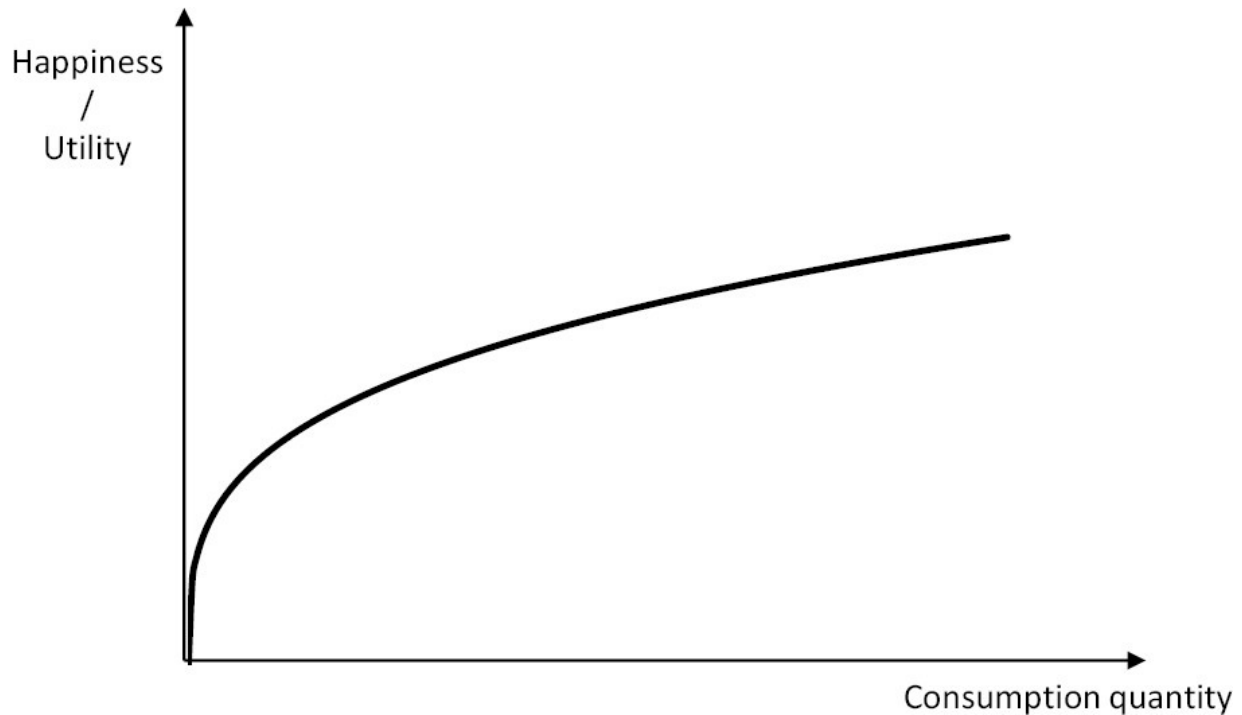


Figure 2-4: Schematic diagram of happiness levels for need type 1

The principle of diminishing marginal utility can be applied to non-material goods in the same way. For example, social contacts are also subject to saturation. If you meet your friends 20 times a month, an additional appointment is less important than if you met them only once a month.

The principle of diminishing marginal utility tends to apply to all needs for which there is no clear upper limit for the positive effect on happiness, i.e., for those needs where the principle "*the more, the better*" applies (e.g., money). I refer to these kinds of needs as type 1 needs. Figure 2-4 shows the relationship between happiness level and consumption quantity as an example of this type of need.

However, there are needs for which perceived happiness does not constantly increase with consumption quantity but reaches a maximum at a certain level and then decreases again. In the example above (*eating slices of bread*), it was mentioned that a

negative perception results if one continues to eat beyond a certain degree of saturation. This means that there is an optimal satisfaction ratio for certain needs. The human sensation of warmth is another example of this type of need. Because every person has a personal temperature range that they find pleasant, deviations above and below this range are assessed negatively and thus represent a reduction in utility. A third example is the taste of salt. Food is usually salted because salt has a positive effect on taste. If food is unsalted, it may taste bland, and eating it will lead to less happiness than eating a more salted food. However, if too much salt is added, the food tastes overly salty and is perceived negatively. Hence, there is a certain consumption quantity that leads to an optimum satisfaction ratio for salt. This quantity varies from person to person and, moreover, depends on the respective food.

I refer to needs that have an optimal satisfaction ratio with a positive consumption quantity as type 2 needs. Figure 2-5 shows a schematic diagram of their associated utility curve.

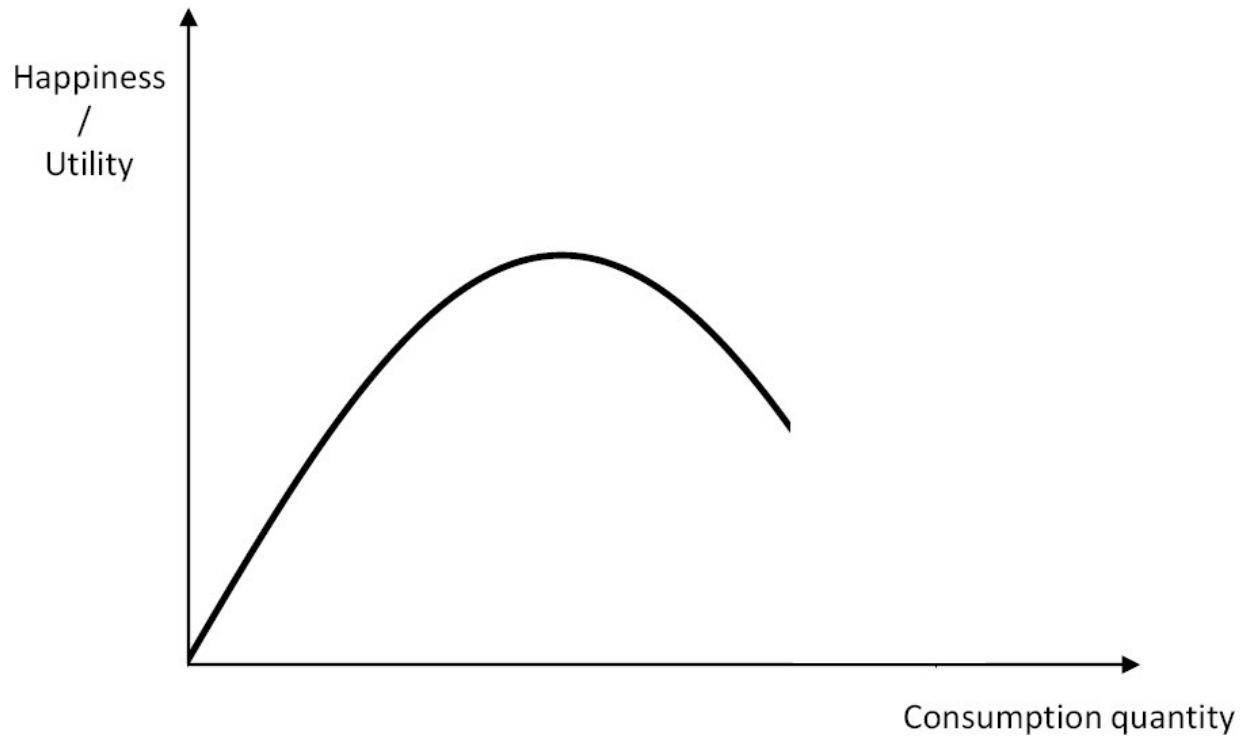


Figure 2-5: Schematic diagram of happiness levels for need type 2

The third type of need results in the avoidance of certain situations. For example, every human being tries to reduce contact with poisonous or harmful substances. The more one is exposed to such harmful experiences, the lower one's happiness level. Therefore, the maximum happiness level for these needs is reached when one is not exposed to a harmful situation at all. Perceived happiness decreases with increasing intensity or frequency of negative situations.

Situations or substances that lead to a reduction in happiness can be described as damaging. Figure 2-6 illustrates the happiness curve of such damage.

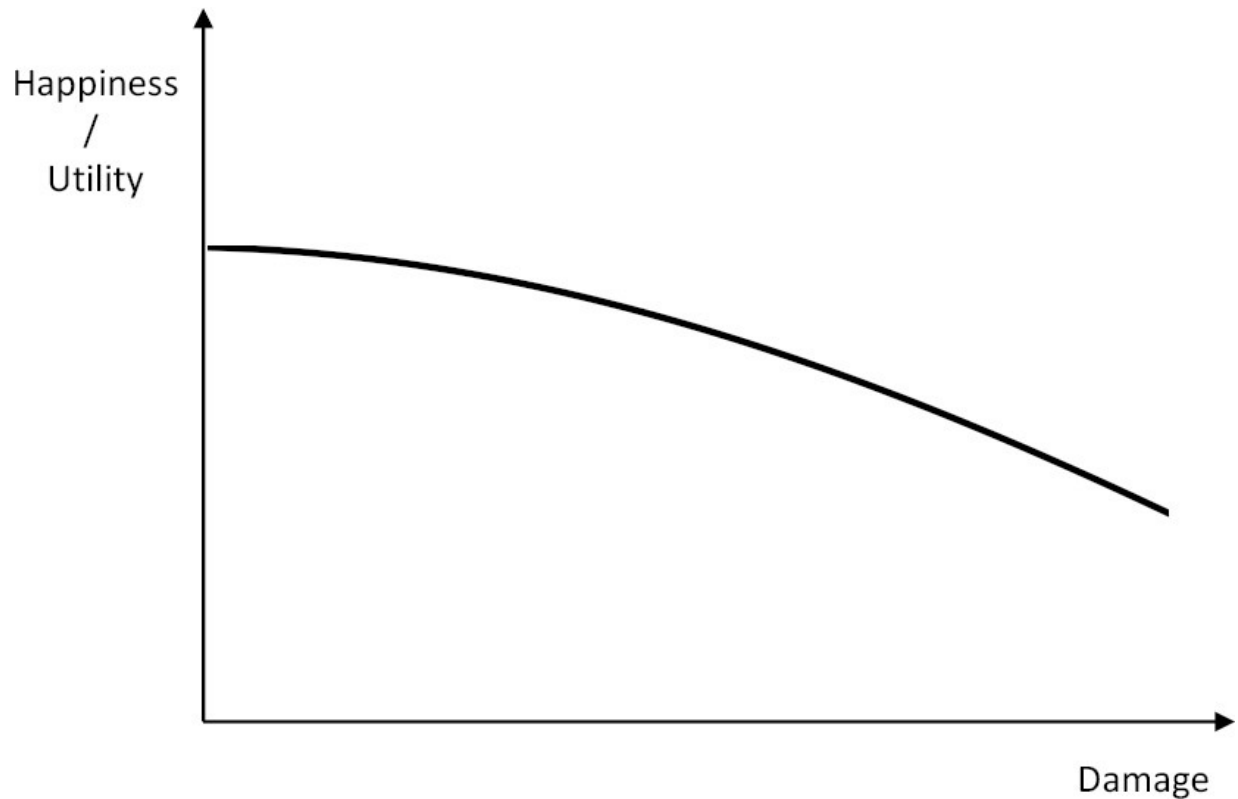


Figure 2-6: Schematic diagram of happiness levels for need type 3

This need type comprises situations that cause fear in a person, i.e., all kinds of phobias. I call needs whose optimum utility lies at a consumption quantity of zero as type 3 needs. Since a type 3 need is about *less*, it is the opposite of a type 1 need, which is always about *more*. Need type 2 can be interpreted as a mixed form of need types 1 and 3.

Of course, the specific course of the utility curves could be different for all three types of needs. For example, the utility curve could increase or decrease more steeply. Furthermore, there could be a whole range of consumption quantities that are perceived as optimal for need type 2, which would lead to the utility curve forming a flat plateau. However, the above-mentioned characteristics – i.e., *the more, the better, optimal consumption area*, and *the less, the better*