# Chapter 2
# The Three Threads of Experience

## 2.1  Introduction

Our everyday experience can resemble a ball of yarn composed of multiple inter-twining threads. Experience exists, but it is hard to conceptualize in a way that is easy to grasp, and it is even more difficult to divide the concept into certain elements. However, in order to design better products or services that can provide a really great experience for users, it will be useful to identify the major elements, or 'threads,' of the experience. What are the important threads that make up our experience? What are the characteristics of each? What dimensions are important in explaining the threads?

## 2.2  Experience is Like an Intertwined Lump of Thread

Allotment gardening, which entails that individuals own or leas a small plot of land for non-commercial gardening, has become an increasingly popular trend over the last few years. When reading newspapers, I often run into sales advertisements on garden plots available in Seoul's suburbs. Dachas in Russia and second homes in USA are similar concepts, which are popular as well. What accounts for this recent trend among city dwellers to own or lease such garden plots?

I own a small allotment garden. About 10 years ago, my parents packed up their city life and moved to the countryside because of health issues. They built a small house and started growing plants by it. From when they moved my Sundays start at 4:30 in the morning. There is no need to set the alarm now that I'm so used to it. After getting ready, I head to the kitchen to pack what my wife had prepared last night—neat stacks of lunchboxes filled with homemade dishes for my parents. Then, I'm all set to leave. In little traffic, it takes about an hour to get to the countryside where my parents and my garden await me.

As soon as I have greeted my parents and given them their food, I change into my work clothes, pick up my tools, and head to the garden. The morning air of the countryside is always refreshing. Today, my to-do list consists of picking up dead

leaves and trimming messy tree limbs. I also have to take care of the overgrown trees that have been growing for 10 years. I have to carefully move them to a more spacious spot. At first, when these tasks were quite unfamiliar to me they were difficult, but now I am accustomed to them and my gardening skills have improved. After the relocation of two big trees, it's already time for breakfast. The food from the lunchboxes tastes amazing as always, even better with the parents.

After breakfast, I pick two mulberry trees near the house. The berries are at their best after a period of much sunshine. I bump into the new neighbors next door who recently moved in from Seoul. We chat for a while, mostly about the cucumbers and peppers I'm planning to harvest in a couple of days. I'm quite thankful to have someone so close by to talk to in a country village in which only a handful of people live.

After a brief lunch, I reluctantly say goodbye to my parents. It's still before noon, so it takes me an hour to get home. Two hours of driving might sound like a lot, but I actually find myself spending the time to organize my otherwise disorganized thoughts. Much of the content in this book are also an outcome of those thoughts. As soon as I arrive at my home, I hand the handpicked fruits and vegetables over to my wife and by doing so I wrap up my Sunday morning.

What I saw, heard, said, and felt at the farm on this Sunday morning is all a part of my valuable experience through which I can feel more fulfilled with my life. I feel like my week is incomplete whenever I can't make the trip and experience the things I do there.

## 2.3   Threads of Experience: An Essential Compromise

As mentioned in Chapter 1, an experience is characterized by its holistic nature. In other words, an experience is a blend of diverse elements that cannot be easily broken down. Driving to the countryside, picking berries, having a breakfast with my parents, and talking to the neighbors all together build up my Sunday morning experience. Each part of the experience is too closely related to be separable. One part leads to another, and the whole experience cannot be fully understood if we were to try to explain only a single part of it. For instance, the two hours of driving every Sunday morning doesn't sound too pleasant was it not for the fact that the purpose of that drive was to be able to have a lovely breakfast with my 80-year old parents. Without the singing birds and sweet morning air, lifting heavy tree trunks would not make me eager to want to experience that again. All these details, as a whole, created this meaningful Sunday morning experience.

However, the story is different when trying to understand a person's experience during the process of designing a product or service that can provide a better experience. Although it is difficult to divide experience into distinct parts, it is feasible to try to understand what elements constitute an experience without overlooking the overall context or circumstances that surround it. Of course, it is impossible to draw clear boundaries between the elements because of the holistic nature of experience. What we can do is to group the pieces that are more closely related to each other and

regard them as elements and analyze the relationship between the ones who are less closely related. This approach allows us to interpret human experience in a more systematic way and to provide better overall experience for users.

Experiential philosophers claim that there is no rational way of breaking down experience into elements (James 1964; Dewey 1934). This attempt to split up experience needs to be philosophically compromised, but it can be quite useful in practice if it can assist us in coming up with strategies to make our experiences more meaningful.

However, it is very dangerous to disassemble experience without any standards. If done wrong, we can end up with ambiguous elements as well as ambiguous relationships between the elements. Therefore, we need to find academically well-established standards and theories that we can refer to. Past studies on human experience suggest that an experience is like an intertwined lump of different kinds of threads (McCarthy and Wright 2004). Among them, there are three threads that are especially important and help us understand our experiences: the sensual thread, the judgmental thread, and the compositional thread.

The sensual thread of experience is concerned with what we sense through our sensory organs. The cheerful sounds of morning birds, the spectacular sunset over the countryside, the sweet and sour taste of luscious berries, and the soft walk on the garden path are all important sensory elements of the experience.

How we judge or evaluate our experience through our thoughts and feelings is referred to as the judgmental thread of experience. Pruning the branches and helping the trees to grow better by relocating them makes me feel proud of myself. I feel happy and healthy doing hard physical work out in the fresh air. My Sunday morning experience wouldn't be fully understood without these values that I appreciate.

The compositional thread of experience is the aspect concerned with relationships and interaction of oneself with others, people or things. The relationship between me and my parents and the interaction between the neighbors and me affect the harmonious experience at the farm. Also, being able to dine with the family and share the handpicked fruits and vegetables at home enriches my Sunday morning experience.

Each thread of experience—the sensual thread, the judgmental thread, and the compositional thread—can be woven (crisscrossed with each other) into different patterns. Different mixes of threads can create diverse and unique patterns that can influence human experience. It is not possible to design the experience itself, but it is worth the effort to drill down into its ingredients to see what provides the really good experience. Let us now take a closer look at how we can characterize each thread of experience.

## 2.4   The Sensual Thread of Experience

Have you ever been to a rock-band concert? At most such concerts the loud music is amplified to its full volume along with the screaming of the crowd. Talented performers show off their flashy dance moves in their fashionable hair and costumes.

You can feel the high temperature in the venue with a strong smell of theatrical smokes, which at some point cools down with a dry ice fog. We refer to this kind of experience as the sensual thread of experience: see, hear, touch, smell, and taste through our sensory organs (Norman 2004).

Sensual experience is very real and specific for it involves direct stimulation of our senses. It's what we naturally feel before we think deeply or make decisions. For example, at the concert, there is a moment in which we experience pure excitement, and all else is forgotten, including worries about grades or other aspects of life. At that moment you are entirely focused on the music and the performance, and this is what sensual experience is.

Sensual experience is not just about what you perceive, but also how you react to what you perceive. Swaying back and forth to the beats and singing along to the songs is a part of the sensual experience. Thus, a sensual experience is concerned not only about what we sense, but also how we naturally respond to the senses. Therefore, enjoyable interaction is also considered to be a vital part of a lively sensual experience (Steuer 1992).

Sensual experience is a critical medium through which humans can interact with the external world. If we can see but can't hear, or can hear but can't feel, then our experience would be fragmented (Dewey 1934). Through a fragmented experience, we cannot have an effective interaction with the external world, which will ultimately result in a poor quality of the experience. For a real experience, a rich sensual experience is essential. A rich sensual experience is also necessary for judgmental experience and compositional experience, which we will discuss in the following sections. It is because we can make judgments or set relationships based on what we have perceived (Hartson 2003).

### 2.4.1   Weaving the Sensual Thread with a Sense of Presence

Many factors affect the sensual experience of humans. Personality and current mental states of an individual as well as his/her talents and behavioral characteristics can all influence it. However, these are the factors that we cannot control by adjusting the design of products or services. With what aspects can we then strategically control a user's sensual experience through design? The answer is "a sense of presence."

A sense of presence, or simply "presence," is the sense of "being there" (Minsky 1987; Biocca 1997). In particular, presence in virtual environments has been a hot topic of interest in recent years. A virtual environment is an artificially constructed space through some sort of medium. People these days are mostly stimulated through some medium and feel its presence. Let's take a computer game for an example. We imagine ourselves being in space as we view the animated images on the computer screen and the medium engenders a sense of presence. A sense of presence in the virtual environment is also referred to as 'telepresence" (Minsky 1987).

Presence can be largely divided into three types—physical presence, social presence, and self-presence—depending on the subject that is present (Lee 2004; Lombard and Ditton 1997).

Physical presence means that objects are being felt. For example, I can feel like the physical sword I'm holding or the monster I'm fighting in an online game. They can both have a sense of physical presence. This is also known as "presence as realism."

Social presence is about feeling others that are connected to a system or network. Facebook is a good example. This presence is about whether I feel the people who I interact with on that network. Social presence is also known as "presence as social richness."

Self-presence is about being able to feel oneself in the moment. It is determined how real it is, for example how real it feels to move a medieval castle in a computer game or if I can feel like I'm truly inside a computer game as my virtual avatar. This is what we call self-presence. This is also referred to as "presence as transportation."

Users can indeed feel a high sense of presence when they can feel high physical presence, social presence, and self-presence. If I felt a great sense of presence through the online game, it means that what I saw on the screen felt like reality, that I felt close to the other gamers, and that I felt like I was actually there fighting off enemies.

## 2.4.2  High Presence vs. Low Presence

Modern technology is evolving in a way that could offer its users a high sense of presence. However, it's not always the best to feel high presence (IJsselsteijn et al. 2000). In case of a pop music venue I talked about earlier, you would definitely want to feel the strong sense of presence of the singers and the dancers. On the other hand, there are times where you prefer not to feel such high sense of presence. For instance, I like to listen to classical music while studying and usually keep it at a low sound-level because it helps me concentrate better. It is important to let the users feel the right level of presence, and to do so we need to fully understand the characteristics and context of products or services. A really great experience that gives users just the right amount of sense of presence—let's call it a "senseful" experience. A senseful experience can be associated with either high presence or low presence. Following are examples of each.

One example of a high-presence experience is a Klive concert (http://www.klive. co.kr/eng/). Klive is a specialized hologram performance hall where the top K-pop content is combined with cutting-edge digital technology. Audiences can watch the performance projected onto a 270° view media façade and with a 14.2 channel surround sound with lighting and special effects that allow us to a vivid sense of reality. We feel as if we are actually at a live concert sensing all that you would there.

Let's take a look at an example of a low-presence experience that is good—driving with a GPS device. The main purpose of GPS devices is to assist drivers to get

to their destination quickly and safely. Therefore it is important to help the users not lose their focus on the road while providing helpful navigation during their journey. However, we can often find GPS devices that generate overly high sense of presence, mainly due to overdeveloped technology. Ostentatious 3-D graphics and endless warning sounds can be quite annoying when driving. They can even start to buzz when the driver doesn't follow the instructions. Sometimes there's can be too much distraction from the device, which can obviously be dangerous in the traffic. Steps are being taken to avoid this risk by pushing for a standardization of GPS devices (e.g. screen size, volume, displayed information) to ensure that how the devices are sensed is safe and reliable and that they are not too distracting.

### 2.4.3  Why is Presence Important for Sensual Experience?

A sense of presence is about being able to perceive through our senses and to react to the stimuli. Let's take Klive as an example again. Renowned singers and dancers are displayed on the screen. The sound of high fidelity singing and chorus makes the settings feel more realistic. The strong smell of theatrical smokes is provided at the right time. Dry ice fog cools down our skins. And with all of this going on we can dance to the music. All of this generates my sense of presence at the Klive.

Renowned German philosopher Immanuel Kant argued that our thoughts and behavior are heavily influenced by our mental representation that is constructed based on the sensory perceptions, and the quality of the mental representation is largely determined by the sense of presence. (Kant 2006). Presence is also related to the concept of sensory affordance, letting people see, hear, feel, and enjoy the sense of presence allows them to make the right judgments about their perception (cognitive affordance) and behave accordingly (physical affordance) (Hartson 2003).

To conclude, a sense of presence is an important factor that determines the perceived quality of our experience as shown in Fig. 2.1. Presence can be affected by the design of a product or services, thus it is regarded as a key moderating factor, with respect to sensual thread of experience (Mollen and Wilson 2010; McMahan 2003, Biocca 1997; Lombard and Ditton 1997; Lombard et al. 2000; Tamborini 2004).
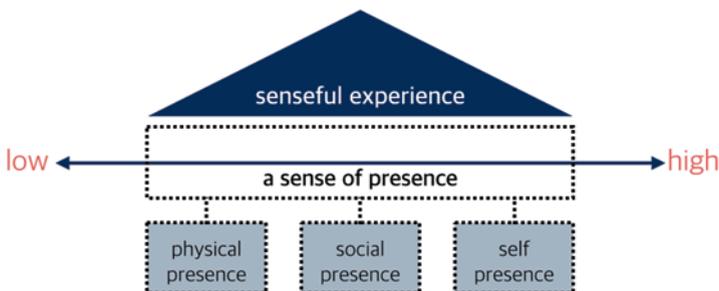


**Fig. 2.1** The sensual thread of experience and a sense of presence

## 2.5 The Judgmental Thread of Experience

A severe drought struck my allotment garden recently, causing serious losses in fruits and vegetable crops. As a remedy, I bought a long garden hose from the near-by store to water the plants. It took me weeks until the plants came back to life, but I was happy with my achievement.

Judgmental experience is concerned with my evaluation of experience in terms of what and how I achieved or obtained from it. Was my desire to have fresh fruits on the dining table fulfilled by watering the plants using a garden hose? What impact did my decision to buy the garden hose have on my overall experience? The answers to these questions can determine my judgmental experience.

We make decisions or judgments almost every moment of our lives, and their results can spark several feelings within us, for example happiness or sadness. Thus, some people refer to judgmental experience as an emotional experience (McCarthy and Wright 2004). However, our judgments are not solely determined by our emotion, but also by our actions and the process through which we try to rationally interpret the consequences of our actions (Csikszentimihalyi and Csikzentmihaly1991). For example, I value working in my garden highly not only because of the emotional satisfaction I get from it, but also because of my rationale that the physical workout is beneficial for my health.

People in general go through the process of interpreting the external stimuli in their own way in order to understand if what they are experiencing makes sense. One thing that distinguishes judgmental experience from sensual experience is this reflexive nature of humans, also known as 'sense making.' In other words, we evaluate our experience as good or bad. My work in the garden is enjoyable to me, despite the strenuous physical effort, because I think it helps me step out of my office, get some fresh air, and stay in shape.

We constantly evaluate our experience. Evaluation can be made at the moment of our experience or even afterwards during retrospection. I can make a judgment about my gardening experience when I am there doing the work or on my way back home in my car. As such, we make judgments constantly and repeatedly in our lives, which makes the judgmental thread an important element of experience.

### 2.5.1 Value Judgment: is my Experience Useful?

After any experience, we tend to evaluate what value it holds, or what we get out of it. Value is related to what we want or need, and it can be viewed as the standards on which our evaluation is based. Here we introduce the two types of values that people consider most important when evaluating experiences (Sweeney and Soutar 2001; Woodruff 1997).

The first one is utilitarian value, which is related to the functional needs or goals of individuals, and it can be defined as our assessment of whether the experience was successful in terms of achieving a goal. One example would be a person search-

ing the web for stock prices before making an investment. Another example is a traveler in a foreign country looking for directions using a smartphone. These examples illustrate the utilitarian value that we can gain from our experience.

The second one is hedonistic value, which refers to the emotional satisfaction or pleasure we get out of our experience with products or services. Hedonistic value is mostly about the positive feelings such as pleasure, excitement, satisfaction, or happiness, but sometimes it can also be associated with the negative feelings such as fear or frustration. Hedonistic value itself is a goal and a need, unlike utilitarian value. For example, we play online games because we enjoy the action of playing games, or learn a new language because of the enjoyment from the process of learning itself.

If an individual evaluates a product or a service as effective in providing his expected value, he perceives the experience as a useful one. People would like their experience to be useful, or valuable, at all times. A valuable experience can make us happy, and we look forward to a similar experience again. This explains why we tend to go back to products or services that offered us a valuable experience in the past (Venkatesh and Davis 2000), and why users' perceived usefulness is an important element of judgmental thread of experience.

### 2.5.2   Locus of Causality Controls the Judgmental Thread of Experience

Then which factor can alter our perceived quality of judgmental experience? What makes us appreciate our experience as a valuable and useful one? I believe it's the locus of causality.

Locus of causality is highly related to locus of control, a construct that was first introduced by an American psychologist named Julian B. Rotter. Locus of control refers to the extent to which individuals believe that they can control the events that affect them (Rotter 1966). People with an internal locus of control feel responsible for the outcomes and believe that the future is a consequence of their actions. On the contrary, those with an external locus of control tend to believe that they have very little control over what's happening and think that external factors determine their outcome. In psychology, locus of control is considered to be an important aspect of personality (Diamond and Shapiro 1973; Layton 1985). For example, lack of autonomy in the workplace is stressful for employees with an internal locus of control, while those with an external locus of control have performed better under a set of rules (Kolb 1996).

The concept of 'control' suggested by Rotter has been extended to cover two important aspects of our perception (Pettersen 1987; Wong and Sproule 1984). The first is about the perception of being able or not being able to control what is happening around us (Graybill 1983; Palenzuela 1984). For instance if a student feels that she can pull up the grades on the final exam by spending time to study, her judgment is based on the internal locus of control. If she thinks the grades will depend

on the difficulty of the exam questions, her judgment is made based on the external locus of control. The second important aspect of control is concerned with causal attribution, or how we make judgments based on the cause of an event (Heider 1959; Kelley 1967). For example, if you believe you caught cold because you didn't properly take care of your body, it is based on an internal causal attribution. Thinking that it's from your colleague is a result of an external causal attribution.

The concept of control, which was traditionally valued as an important element of personality, can also be expanded to explain the aspects of experience. This is referred to as the locus of causality. Locus of causality is related to how users evaluate their experience with products or services, with respect to the process and the outcome of the experience. The concept is also associated with two other aspects: whether our judgment is based on an internal or external goal, and how much control we have during the process of experience.

### 2.5.3 Internal Locus of Causality vs. External Locus of Causality

When you think you have a full control over your experience, the locus of causality is internal. An RC car, a small, self-powered model car, is one example. Unlike other toy cars, RC cars are fully customizable. It is completely up to you what motor is installed and what material is used in the body of the car. You can even choose how you want your car to be assembled. And of course the best part is driving them around the race tracks using a remote control. The entire process of shopping, assembling, and driving can be a fun experience for a user. Plus, the complete freedom of a user in customizing the car illustrates the example of an internal locus of causality.

The locus of causality is external if there's not much we, as users, can do to affect the experience. For example, a robot vacuum cleaner is often set to its default settings from the manufacturer, and there's generally not much need to change those settings. So usually we just turn on the power and the robot starts its job. There's no user involvement in the process of cleaning; the robot automatically takes a detour when it hits a wall or a threshold. It can be handy to have a robot cleaner at home, but barely anyone would feel any responsibility or enjoyment from using the device.

### 2.5.4 Why is Locus of Causality Important in Judgmental Experience?

We want to be a part of a valuable experience, and it is the goal that we pursue. But the criteria of what we think is useful can change since our values may transform over time as we go through various circumstances and situations. In order to cope with such change in designing useful products or services, locus of causality is a vital factor, which needs to be understood. The reasons are as follows.
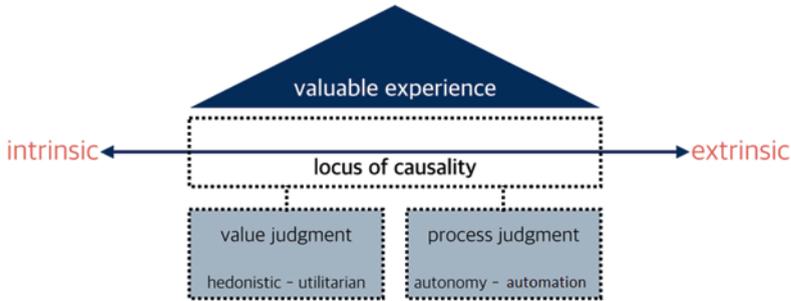
**Fig. 2.2** The judgmental thread of experience and locus of causality

Judgmental experience is about the user evaluation of the usefulness of a product or a service. What people value and how they evaluate usefulness can change over time. What we value is dependent on its source, or where it comes from. It is mainly because we think that the perceived value is a consequence of the source. There can be a myriad of different sources, so it is unpredictable to rely on each and every source in understanding the users' values. Instead we need a general concept that describes the source, which can be applied in a wide range of situations. Internal and external locus of causality is a general concept that can be flexibly applied in most circumstances across diverse products or services in various contexts.

Furthermore, locus of causality doesn't favor one to another. In other words, internal locus of causality is not always preferred over the external locus of causality and vice versa. Depending on the situation, either the internal or the external can be perceived as more useful than the other.

Also, locus of causality is related to the evaluation of both the process and the outcome. For instance, locus of causality is concerned with how much control I have during the RC car buying experience. At the same time, the concept is also dependent on whether the process itself was valuable for me or if I was more interested in the outcome of the experience and how I would use the outcome for another purpose. It is a notion that deals with both process and outcome, which is directly related to our judgments from experience. In conclusion, as illustrated in (Fig. 2.2), locus of causality is a critical element of the judgmental thread of experience contributing to the meanings and values that users receive through products or services.

## 2.6   Compositional Thread of Experience

Back to my allotment garden in the countryside. As I mentioned before I enjoy the presence of my neighbors there, more so than in my home in the city. There are very few inhabitants where the garden is, so it's always thrilling to have new neighbors or visitors.

The compositional thread of experience is concerned with the relationship between the elements that make up an experience. Our experience is shaped by relationships among people, objects, and surroundings, and the meanings we find in an experience depend on those relationships. Without the consideration of relationships, it is not possible to fully understand an experience as a whole.

Compositional experience puts emphasis on the relationships between the parts of an experience. Unlike sensual experience and judgmental experience that try to understand an experience as a whole, compositional experience focuses on the elements of an experience and the relationships between them. Depending on what elements we are interested in, our experience can be interpreted in a whole new level. Compositional experience is largely composed of three types of relationships based on the characteristics of the elements being considered. In next three subchapters I will address those relationships.

### 2.6.1   Temporal Relationships: Relationships among the Past, Present and Future

One of the most important types of relationships was introduced by John Dewey: a temporal relationship between an action and its outcome (Dewey 1929). Let's say a child dipped its hand in a boiling pot of water and screamed out loud. If we perceive the incident as two independent events, the experience is not considered singular. Once we realize the relationship between the dipping and the screaming, a link is formed between the two and creates an experience of burning your finger from a hot object. With respect to the temporal aspect, an experience could be construed as a sequence of a past event, a current event, and an upcoming event. For example, watering the trees in the garden, observing them when they grow back to life, and having their fruits on a dining table are temporally related to one another. This is why compositional experience is also known as narrative structure (Wright et al. 2008). It is built upon the temporal relationships between how we act, how the environment reacts to our action, and how we react to the reaction.

### 2.6.2   Social Relationships: Relationships Between Me and Others

A social relationship refers to the relationship between me and others. From a social perspective, compositional experience comes from me being linked to a specific person, and that person being linked to another person who is again linked to the fourth person. For example, my experience of talking to my coworker this morning can be directly and indirectly affected by their relationships with their peers, as well as the relationships of the peers with their peers. Social relationship structures among people closely resemble those of the temporal relationship. Just like how a

past event and an expected upcoming event can influence my current experience, the relationship between me and my friends as well as the relationship between my friends and their friends can all influence my experience.

I usually set my Facebook profile pictures as the ones that inspire me the most. The very first one was taken in Quebec, Canada, while I was on my summer leave. I remember I was on my way to the downtown when I took a photo of historic buildings gleaming in the sunset. A few days after I set the picture, a former graduate student of mine, now living on the other side of the globe, informed with a message that he'd also been there. We started a dialogue on my Facebook timeline, which another graduate student of mine joined who I hadn't heard from in over 20 years, and in which we reminisced about our joint projects in the past. I was delighted to hear from my former students. This was a real experience.

If I had not been emotionally tied to the students, or if the message had been from a random person who I had no emotional relationship with, my experience wouldn't have lingered in my heart for so long. This example was to illustrate that the relationship between the entities involved in an experience is significantly important.

### 2.6.3  Structural Relationships: Relationships Between Me and Products/Services

When we are talking about the 'relationships,' it is not just about people, but also about objects (e.g. products and services). My experience is affected by how one product or service is related to other products or services. Let's take as an example of the process of calling my wife through a smartphone. First I search for her number on the favorites list. Then I make a call but she misses the call and doesn't answer, so I end up pressing the message button to text her. The experience of searching through the favorites list and texting her are linked together, and how smoothly the two are connected can greatly influence my overall experience with the smartphone.

As illustrated, we can be interested in the relationship between different functions within a product, but we may also be interested in the relationship between multiple different products or services. A few days ago, my son asked for a picture of his grandmother. I looked for a picture on my Dropbox folder through the Dropbox application on my smartphone and attached the downloaded photo to a text message. Likewise, my experience of sharing the photo with my son was in part based on the relationship between my smartphone and the Dropbox application.

### 2.6.4  Harmony as the Ideal State of the Compositional Thread

In terms of the compositional point of view, what is the ideal state of an experience? The answer, based on Confucianism, is harmony, which refers to the state of balance among the elements that make up an experience (Kwan et al. 1997; Li 2006).

In the ideal world of Confucianism, all relationships are perfectly harmonious. Eastern philosophy tries to understand social relationships in terms of harmony rather than in terms of satisfaction. According to Confucianism, the concept of harmony can be explained through different levels.

Firstly, there's harmony on the individual level. An example would be the balance between one's height and weight. A balance between body and mind is important for an individual to be in a peaceful state. As discussed earlier, harmony among the past, present, and future events a person lives can together form a harmonious experience, and this harmony is also on the individual level.

Secondly, we can also think of harmony on the interpersonal level. The balance among family members, local community members, or people of different nations is an example of interpersonal harmony.

Lastly, we can find harmony in an object and its relevant surrounding. The nature around us or the IT-friendly environment can form harmony with the modern people. Being able to connect to high-speed internet service at any time through all the necessary devices is a good example of a harmonious experience among products and services.

To conclude, harmony is a broad concept that describes the balance of time, social relationships among people, and relationships between people and their surrounding environment.

### 2.6.5   Relational Cohesiveness: How Tight are We?

Most people always yearn for harmony in their experience, but how we evaluate harmony can vary from case to case. It's because "harmonious relationships" in our minds can transform over time, depending on the context. We need a way to control compositional experience accordingly to provide the most harmonious experience for users. In this book we propose 'relational cohesiveness' as a strategic measure that can control the compositional experience of users.

In sociology and network theory, cohesiveness measures how strongly the members of the groups are tied to each other (Moody and White 2003; Friedkin 2004). In other words, cohesiveness of a group can indicate their tendency to stick together (Wasserman 1994). The higher the cohesiveness, the more likely for the members to stay together. Likewise, the lower the cohesiveness, the higher the chance of them to leave the group (Festinger 1950).

The concept of cohesiveness is often used in an interpersonal context. The notion of 'relational cohesiveness' is adapted from the concept, and it can be used to interpret a user's experience with products or services. From a compositional perspective, an experience can be viewed as a network structure composed of its elements connected to each other. A network is composed of links that connect nodes. A simple example is a friendship network on Facebook. Each person acts as a node and a link exists between the nodes if there is a friendship relationship. A social network of a Facebook user is shaped by how its friends are connected to each other.

Let's instead think of the nodes as the elements of an experience, and draw the links whenever there is a relationship between the elements. We now have an experience network, from which we can find out the relational cohesiveness between the elements that build up an experience. For instance, we can measure the strength of relationship between Google's Gmail service and its other applications to explain a user's experience with Gmail.

### 2.6.6   Strong Cohesiveness vs. Weak Cohesiveness

We can think of a Korean railway station (KTX) as an example of a weak relational cohesion. Korea is a small country but we have a very well-constructed railway system; we can travel from one end of the country to the other in less than three hours. The central station in Seoul is always crammed with people, but there is barely any interaction among people. Passengers are from all over the country, and thus the probability of one person meeting another person he/she knows is very low. Therefore, it can be considered as an experience with low relational cohesiveness.

A strong relational cohesion can be observed in a faculty canteen at my university. Because I've been working at the university for the last 20 years the probability of me knowing other persons in the canteen is very high, especially given the fact that this is the only faculty canteen on the campus. In addition, those people are socially connected with others in various ways (e.g. same department, same college, etc.). Even those who I do not personally know can easily be introduced through a mutual colleague. Thus, my experience at the faculty canteen is considered an experience with a very high relational cohesiveness.

### 2.6.7   Why is Cohesiveness Important in the Compositional Thread of Experience?

Relational cohesiveness has several characteristics. Firstly, it does not depend on the size of a group. Just because a group has many members, doesn't mean that it's less cohesive. Similarly, small groups are not always strongly bonded. A group of three or four can be weak in cohesiveness if there isn't much interaction among its members.

Secondly, relational cohesiveness is a continuous metric. In other words, we do not say that cohesiveness exists or doesn't exist, but instead measure the strength of cohesiveness on a continuous scale (Wasserman 1994). To illustrate, a passenger service offered at the campus bus station is relatively more cohesive compared to the services offered at the railway station.

Thirdly, relational cohesiveness is dynamic (Carron and Brawley 2000). There is no absolute measure of cohesiveness, and the level of cohesiveness may change over time. When my college friends first set up a Facebook page, it was weak in cohesiveness. Over time however, I observed stronger cohesiveness as people more frequently posted pictures and status updates and participated in events they were
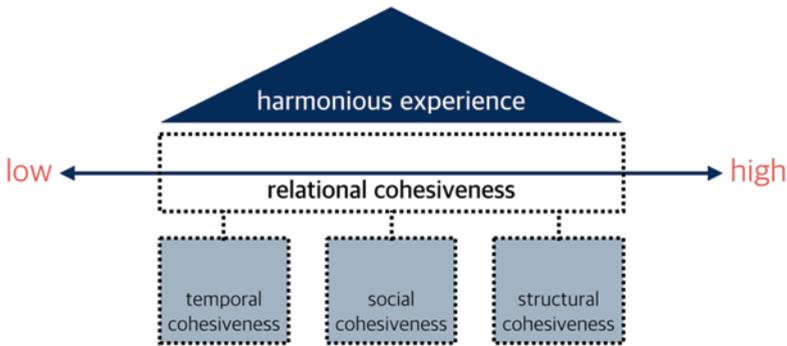
**Fig. 2.3** The compositional thread of experience and cohesiveness

invited to through Facebook. These characteristics show that a group's dynamic and cohesiveness can be strategically altered. Planning a regular meet-up for team members or organizing a big gathering for the company is a part of an effort to boost the level of relational cohesiveness.

Lastly, cohesiveness can explain the structural property of a group as a whole. According to social network theory, networks can be analyzed in terms of 'connectivity' or 'distribution' (Yamagishi et al. 1988). By connectivity we mean that we are interested in one-on-one relationships between members of a group. How often I exchange messages with a friend in a Facebook group would be an example of connectivity. Distribution is a characteristic pertaining to the entire network. For instance, the Facebook group page of my high school alumni is administered by the class president, who takes charge of organizing events. We also have a vice-president and a treasurer who help the president with the planning. There is a hierarchical structure among the members of this Facebook group page, which can be viewed as a structural property of my high school alumni network. Another typical example would be a star network, where there is one central node linked to the rest of the group.

To conclude, the concept of cohesiveness (Fig. 2.3) can be used to explain temporal, social, and compositional relationships. The continuous and dynamic properties of cohesiveness can contribute to the harmonious experience of users by allowing us to be ready for the changes that occur around us. Furthermore, the fact that it does not depend on the size of a group makes it possible to easily apply the concept when interpreting diverse applications.

## 2.7   Unweaving Experience into the Three Threads of Experience

As mentioned in the beginning of this chapter, experience is holistic in nature, composed of closely-related parts that cannot be easily separated. However, in order to design products and service that can provide better experience for the users, an

analytic framework to understand different aspects of experience is necessary. In this chapter, we identified three threads of experience and talked about what people consider the most important element in each thread. We also discussed how we can strategically control these elements. With respect to the sensual thread of experience, senseful experience can be controlled through a sense of presence. In terms of the judgmental thread of experience, valuable experience can be provided through the control of locus of causality. Lastly, with respect to compositional thread of experience, we can offer harmonious experience to the users by controlling the relational cohesiveness. In the next chapter, we will discuss how these threads are intertwined together to provide a really good experience for people.

## 2.8   Summary

- Human experience is holistic in nature, so we can easily miss the big picture if we focus on its parts.
- However, in order to offer users a real experience, we need to separate experience into different controllable aspects. The three threads of experience can effectively portray the aspects.
- In terms of the sensual thread of experience, it is important to allow users to feel the right amount of stimuli through their senses, which can be achieved by controlling a sense of presence.
- In terms of the judgmental thread of experience, users need to feel that an experience is valuable, which can be altered by the locus of causality.
- In terms of the compositional thread of experience, there has to be a harmony within the temporal, social, and environmental relationship among the elements that make up an experience. Harmony can be controlled through relational cohesiveness.

## 2.9   Discussion Topics

- With respect to the sensual thread of experience, think of the time when you felt that your experience was most senseful. Why did you feel the experience was enjoyable?
- With respect to the judgmental thread of experience, think of the time when you felt that your experience was most valuable. Why did you feel the experience was valuable?
- With respect to the compositional thread of experience, think of the time when you felt that your experience was most harmonious. Why did you feel the experience was harmonious?

- With respect to the sensual thread of experience, think of the incidents where the sense of presence was high and low. What do you think is the reason for the difference in sense of presence?
- With respect to the judgmental thread of experience, think of the incidents where the locus of causality was internal and external. What do you think is the reason for the difference in locus of causality?
- With respect to the compositional thread of experience, think of the experiences with strong and weak cohesiveness. What do you think is the reason for the difference in their levels of cohesiveness?

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