

The Ta-Da Series

Presentation of a technique and its use in generating a series of surprising designs

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Abstract:

Surprise is an emotion that is used very explicitly in personal interactions and in narrative media, yet it is not used in the same way within design. This case study presents a technique devised and used to apply the results of theoretical research on surprise to the creation of a series of surprising objects.

The designs in this series are very different in the way they function, yet they are derived from the same technique, based on cultural expectations, gut reactions and pleasant surprise. To begin with, the design process involved studying what is expected of objects, and identifying what the main characteristics of a specific category of objects are. What do we expect when we approach a lamp? And in particular, are there any signs which we can use to reinforce these expectations?

The second step is to find the opposite of those characteristics and turn them into design concepts. In this case a lamp needs to make light in order to be a lamp, so its main connotation cannot be opposed. But there are other connotations that are not necessarily intrinsic in lamps but which we all tend to associate with lamps, and those are connotations and those are connotations about breakable materials and fragility. The design therefore plays with these expectations by creating a lamp that at first sight has some connotations of a typology of lamp that is both common and extremely breakable; in this way it reinforces the feeling of fragility. But the lamp itself is made of rubber, so if it fell it wouldn't break but bounce.

In addition to this, the technique uses inbuilt gut reactions and fears to reinforce the surprising effect. The lamp only turns on when it is placed on the edge of the table; in this way the lamp will always be in a precarious position, not only reinforcing the feeling of instability, but playing with the user's gut reactions: though the owner knows that the lamp will not break, it is hard to shed the ingrained reaction of wanting to move it to the middle of the table. By using these gut reactions, the lamp creates a playful sense of suspense, and pleasant surprise when one discovers, or remembers, that the lamp is made of rubber and it is meant to fall.

This same technique is applied to three designs, the *On-Edge Lamp*, the *(Un-) Stable Stool* and the *Impolite Coffee Tables*. These three designs will be presented and the differences and similarities between the designs will be outlined.

Keywords: Surprise, Emotion, Design, Furniture, Opposites.

Introduction

Surprise is an emotion that is used very explicitly in personal interactions and in narrative media, yet it is not used in the same way within design. This case study presents a technique devised to apply the results of theoretical research on surprise to the creation of a series of surprising objects.



Figure 1 - Surprise

Most storytellers, whether they are working through speech, film writing, etc. rely on surprise to make their story more interesting or funnier or scarier. The more obvious example of this use of surprise within narrative media is looking at horror or thriller films, in which suspense and unexpected events are often used to underline the fear. However, surprise is also used in other genres to make the story more interesting or funnier.

Take a joke as an example; surprising elements are often created in jokes by playing with the timing of the narrative, or by setting up a recognisable context which carries certain expectations. The characters will then either break the repetition in the timing: take as example any very long repetitive joke and its punch line, or break the context that was set up: any joke in which the characters don't behave as they were expected. It is therefore through breaking a context, whether the context is created by the rhythm and repetition of the narrative, or whether the story unfolds differently than what was predicted from the context, that the surprise will be achieved. The final result is not surprise per se: in the case of a joke the final result will be to make people laugh, the surprise is there to underline the laugh; in the same way the final result of a horror film is fear or disgust, and the surprise accentuates these emotions.

In terms of products, many design objects use elements of surprise and working on the principles of displacement and recognition; taking elements from a certain context, particularly elements that *signify* a certain context, and then applying them to a different context with surprising results. A good example of this displacement can be seen in a lot of objects in the Droog collection: Hector Serrano's *Waterproof lamp*, or Marcel Wanders's *Knotted chair* both play with visual displacement

and merging different contexts; other objects like Hella Jongerius' *Soft Vase* or Dick van Hoff's *Felt Washbasin* also displace the user but by changing the material, so that the surprise might not be apparent at first sight but it will be discovered when touching or interacting with the object.

Though many products use surprising elements to engage the user, the surprise is not usually the main focus of the object. This case study will analyse a technique used to create a series of objects, the *Ta-Da Series*, to show how this emotional element of surprise can be incorporated into design pieces to have them function in a narrative sense and deliver a similar type of surprise. The method used was called the *Opposites Technique*; this paper will show how this is developed through analysing one of the pieces in the series and will then show how it was applied to the create the other two objects.

Surprise and How it Works

The designs in this series are very different in the way they function as surprising objects, yet they are derived from the application of the same technique based on opposites, cultural expectation, gut reactions and pleasant surprise.

To begin with, considering surprise as one of the six primary emotions (Eckman, 1984)) the design



Figure 2 – Peek-a-boo! Surprised Child

process involved studying surprise to determine what type of situations can cause this emotion and what the benefits of using surprise in design would be.

Darwin, in *The Expression of Emotion in Man and Animal*, defines it as the reaction to a sudden or unknown stimulus. The facial expressions and reaction of the whole body to the surprise indicates the function of this

emotion in nature; the body puts itself on alert and prepares itself for action,

the senses are heightened, for example the eyes are wide open, and we are more perceptive to visual but also auditory stimulus. The heart beats faster and the muscles tense, prepared to flee a possible danger. On the whole, a surprised person is paying more attention, is more aware of the surroundings and is more perceptive (Darwin, 1934).

This more perceptive state also heightens our reaction to other emotional stimuli; a pleasant surprise will have a stronger reaction than a pleasant event which is not surprising. In recent neuropsychological studies, such as those by Antonio Damasio, there is a clear correlation between emotion and decision making. Several case studies show that people who have lost their emotional ability through brain damage but retain their rational ability are extremely impaired in decision-making, especially decisions affecting their own welfare (Damasio 1999). The clear benefit in terms of design is that this higher emotional impact will have repercussions when it is time to make a choice as to what product to purchase.

It is important to remember that what we learn to expect, and consequently what we deem unexpected, is acquired through our experience of the world, and the simpler and more common the object, the more expectations we will have about it. Because of this, it becomes clear that the technique would be most effective if applied to objects that we use every day, which we have

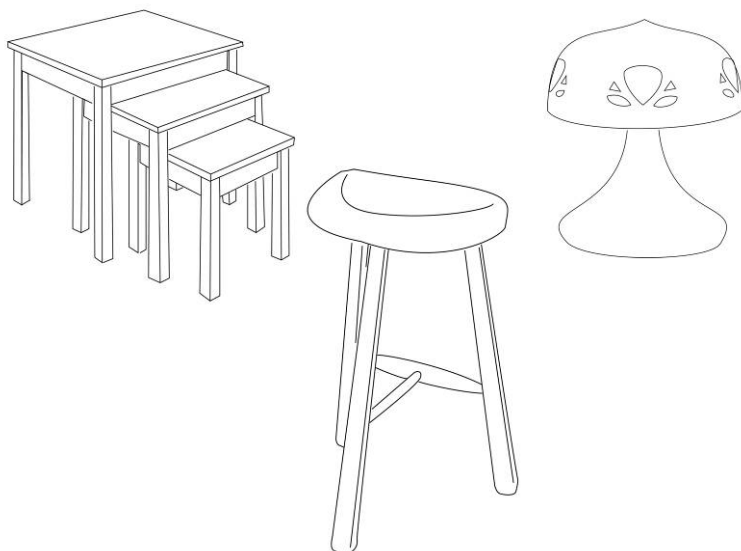


Figure 3 – Furniture Archetypes

expectations on, which in other words we trust.

This is why this project concentrated on designing domestic furniture: we use similar objects every day, we have grown up with them, we know everything there is to know about them. In addition, furniture carries a high emotional charge and emotional attachment: it is passed on from generation to generation, it is lived with. In Baudrillard's words "the primary

function of furniture and objects here [in the family home] is to personify human relationships, to fill the space that they share between them, and to be inhabited by a soul" (Baudrillard 1996, p.16).

The objects selected to undertake the technique are simple pieces of furniture: a lamp, a stool and a coffee-table; we can extract archetypical aspects from each of these objects.

Opposites

After having assessed which objects will be used and what their main expected characteristics are, the second step is to find the opposite of one characteristic and turn it into a design concept. This opposites technique is necessary to make the final surprising piece relevant; there are an infinite number of surprises which could be applied to any object, but the design will have a stronger effect if the final aim of the designer is understandable, in other words if there is some sort of recognition of what the designer is trying to say. In a way, through understanding what the intent of the design is, it is like the user was being let in on a joke or a secret; it creates a sort of dialogue between the user and the designer, and it creates a narrative in which the user, by discovering the message himself, is the protagonist. (Dunne, 1999)

To create a relevant and coherent surprise, and to avoid being gimmicky, the opposites method centres on the essential qualities of the object that is being redesigned. Going back to our lamp, the first quality of any lamp is that it makes light. This quality is essential for its “lampness”: a lamp which does not make light is not only frustrating - it is simply not a lamp. Therefore this property in the lamp could not be subverted. On the other hand there are plenty of other qualities that are normally associated with lamps and which could be opposed without losing the essential “lampness”. One of these qualities is the connotation of fragility. Lamps are usually quite fragile; we all know that if you drop a lamp on the floor it will break. This was then an obvious choice for

something to oppose, it is not a necessary quality, but it is something commonly associated with the object.

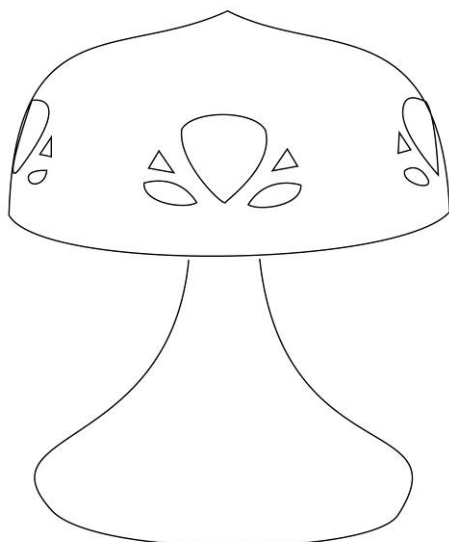


Figure 4 – Mushroom Lamp

The way the design plays with these expectations is by creating a lamp that at first sight has connotations of both a typical lamp and of fragility, but on second thought it contradicts the fragile

aspect. Of course some objects within this typology carry more outward signs of their expected qualities; certain lamps are and look more fragile than others. It was therefore necessary to find a type of lamp that would have the most visual clues as to its fragility, and the obvious choice was to choose a lamp entirely made out of glass. In order for this to be a recognizable feature the shape of



Figure 5 – On-Edge Lamp

the lamp itself had to reference the fact that the lamp is made out of glass; the archetype referenced had to be one of recognizable delicate and fragile nature. The choice fell on art deco glass lamps because they use a clear visual language, in other words they are often shaped “like a lamp” and they are often made entirely of glass. In particular, the type of lamp referred to as mushroom lamp seemed particularly suited for this project because it resembles a lamp shape and

is often cast in clear or frosted glass.

The design features of the mushroom lamp then needed to be incorporated in a lamp design that did not break, and was indeed the opposite of breakable. The obvious choice at this point was rubber. Not only is a rubber lamp not breakable, but it is overtly so; once you know it is made of rubber you realise that the shape is softer and more rounded than the archetypal shape it refers to and it invites you to touch it and play with it.

Gut Reactions

To emphasize the surprise and create a rewarding experience which would involve a realisation of the user’s preconceptions and ingrained behaviour, an additional element was needed. Playing with the user’s gut reactions and ingrained fears seemed a useful addition because it would bring the user to a realisation about herself and her own habits and preconceptions as well as about the object itself. “Gut reaction” is a term often used to describe an irrational and instinctive reaction to a sudden stimulus. In this way it is often based on surprise, but it implies a learnt physical reaction which can be used to catch the user off-guard. Closely related to this is the fact that we can play not

only with what is unexpected of an object, but also with what is feared from that object. This will add some relevance to the surprising object, but it will also create a reward for the user in the end;



Figure 6 – On-Edge Lamp

of the table. This creates a sense of suspense, by staging the future fall, and also tends to stimulate people’s gut reaction to try to move it to the centre of the table. Anyone with children or pets will recognise the tendency to move fragile objects farther from the edge of the table. By moving the lamp onto the table, the user is not only going to touch the lamp, and therefore feel the rubber and realise it won’t break, but will also discover that the lamp can only be turned on when on the edge.

by negating the fear, the end result of the user-object interaction is going to be a positive one. The surprise is turned into an inherently positive surprise because it goes against the initial fear.

In this case, what is feared of a lamp is that it will fall on the ground and break, and possibly be dangerous because of the glass and electricity involved. To reinforce this fear the lamp is only on when it is placed on the edge

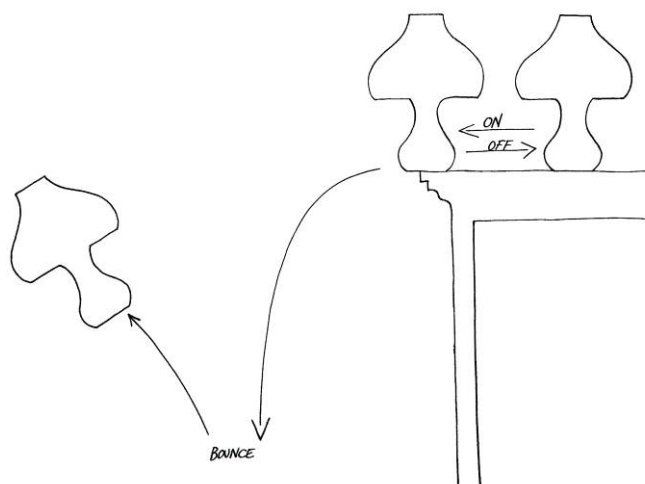


Figure 7 – On-Edge Lamp Explained

This process of discovery creates a narrative between the user, the object and the designer, by creating a difference between what the user thought or felt before the physical interaction, and what she felt after. The sense of suspense of seeing the lamp on the edge adds to the narrative, the surprise creates the punch line, and the positive realisation of the lamp’s unbreakable quality creates the happy ending.

In future interactions, once we are aware of the trick, the sense of suspense becomes playful, we understand that the lamp is toying with us, but we still can't help reacting in the same way when we see it out of the corner of the eye. This also reminds us of the surprise from the first encounter and of the story of the interaction. On the flip side, recalling the narrative will remind us of the object itself, creating more word of mouth and product recognition (Ludden, 2004).

Applications of the Technique

The same opposites technique was applied to come up with the three designs in the Ta-Da series, the *On-Edge Lamp* which we've described at length, the *(Un-)Stable Stool*, and the *Impolite Coffee Tables*. However, the method is applied slightly differently to take into account functional differences and cultural expectations in the types of objects selected.



Figure 8 – (Un-) Stable Stool

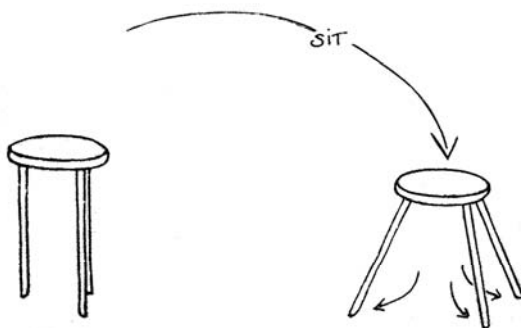


Figure 9 – (Un-) Stable Stool Explained

The *(Un-)Stable Stool*, like the *On-Edge Lamp*, is based on a tactile surprise, but as opposed to the lamp it is not something you discover with your hands but with your whole body. This design in particular uses the physical feeling to its full potential, while really playing with the fear ingrained in this type of object. The stool is an odd height, its seat is particularly small and its legs are set almost at ninety degrees to the seat. When the stool is sat on, its legs splay out, giving the user the impression that it is going to collapse. But after a split-second the legs settle into a locked position and it becomes fully functional and stable.

The idea was to incorporate the movement of splaying legs into some sort of seating, because it is something that is commonly feared when sitting on a chair, or at least a not very solid chair; you fear that its legs will come loose and the seat will collapse to the ground.

The question was what type of seating was most appropriate for this purpose. The first experiments and models were carried out with a traditional kitchen chair, but this type of object didn't seem appropriate enough because it is usually fairly well built and reliable. Various types of seating were then analysed, and the most appropriate seemed to be the three-legged stool because, analysing its characteristics, it is clear that the essential one is that it should function as a seat. The



Figure 10 – First Chair Model

reinforced and then negated. What the user does not expect and will discover only through interaction is that the stool is actually usable and quite solid. In this way the surprise is delayed and

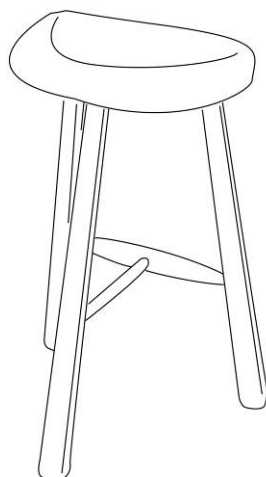


Figure 11 – Windsor Stool

additional connotation is its instability and liability to tip over or collapse.

This feeling of instability is reinforced at first sight with the proportions and the angles of the legs, reinforced again when someone sits on it as the stool starts to collapse, and then contradicted when the stool settles in a very stable position; the user is set out to expect something negative, and then this negative feeling is at first fully

reinforced and then negated. What the user does not expect and will discover only through interaction is that the stool is actually usable and quite solid. In this way the surprise is delayed and it is turned into a pleasant surprise that adds an advantage to the object. Through the surprising element the object is transformed into something that functions better than the archetypal object.

The third object in the series, and the one that is most different from the others is the *Impolite Coffee Tables*. These are three small square

tables, referencing the shape of nesting tables. They are smaller than each other, but the difference is not enough to make them nest, so they don't quite fit within one another. In addition, the surface of the tables has a pattern printed on it in varnish, which is revealed when something is spilled on it and stains only the unvarnished wood. The pattern is different on the three tables but it connects at points when the tables are placed under each other at an angle.



Figure 12 – Impolite Coffee Tables

particularly concerned with politeness, both on the part of the host and on the part of the guests. In this way, nesting coffee tables that refuse to go back to their place and nest are being very naughty, and the recognition of the contrast between these two behaviours is the first surprise.

If it were left at that however, the coffee tables would be fun the first time around but they would



Figure 13 - Staining

The basis for this project is the contrast between the behaviour expected of people in situations where nesting coffee tables would be used and the behaviour of the tables themselves, as well as the behaviour that is forced on the user.

Nesting coffee tables are usually not used every day, but they are pulled out when receiving guests to have tea or coffee. They therefore belong in a situation which is

eventually become just an object that doesn't quite work. It becomes obvious that an extra step is required, later in time, which will create some sort of positive conclusion that negates the first surprise; it needs something that will indicate that the coffee tables do indeed go together, just in a different way.

The next step is to find a way in

which the coffee tables will go together, which will only be discovered over time and through repeated use. In this sense, the pattern printed in varnish will allow bits of the table surface to get stained with the tea and coffee that will eventually get spilled on them. This action also reinforces the sense of impoliteness, since spilling coffee on a table is something that people usually excuse themselves for. In this way the abuse of the coffee table is turned into a positive addition, the spill is turned into the surface decoration.



Figure 14 – Impolite Coffee Tables with Pattern

they are usually made of cheap materials and are badly assembled. The fact that they are meant to be stored away inside each other also indicates that they are not meant to be a decorative

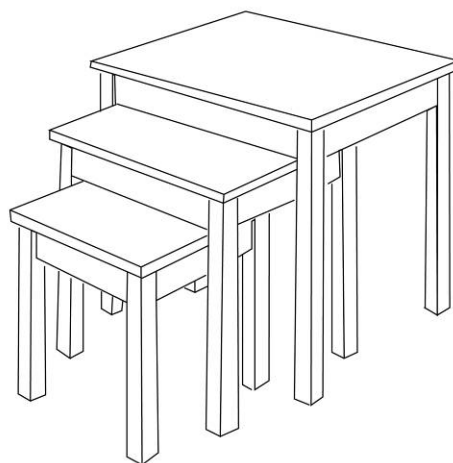


Figure 15 – Nesting Coffee Tables

The pattern that is revealed is based on a stylised floral pattern from Victorian lace doilies. This is because of the English nature of the situation and of the piece of furniture. Having people over for tea is a very traditional English activity, and the nesting coffee tables are also a local staple. In a sense, though, the nesting coffee tables represent a less desirable Englishness, since they are associated with lower-end stores;

they are usually made of cheap materials and are badly assembled. The fact that they are meant to be stored away inside each other also indicates that they are not meant to be a decorative

centrepiece in themselves. Once the pattern is revealed, it becomes clear that the pattern follows through from one table to the other when the tables are in certain positions. This creates a playful interaction between the user and the tables because it encourages the user to move the tables around and see if they connect in different ways. This is therefore the second surprise and the most effective one

because it is something that users will discover on their own, and because it explains, after a long delay of use, the reason why the coffee tables don't nest and the way in which they actually go together. In this sense this second surprise is much more powerful because it has a longer build-up time, which makes the discovery more surprising and ultimately more satisfying.

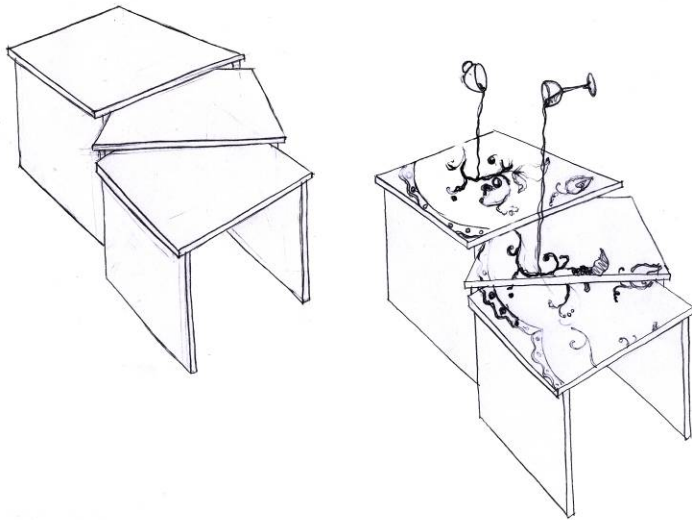


Figure 16 – Impolite Coffee Tables Explained

Visual Representations and Testing

To describe the context for the designs, and to explain the projects in an immediately understandable graphic way, three characters were created, which represent the scenarios that the objects lives in. These characters are meant to be stereotyped exaggerations to underline the type of



Figure 17 – On-Edge Lamp with Housewife Character

feeling created by the objects. They are also meant to resemble comic book characters, sending a message that the images should be read as a sequence in time, a narrative, and also that the whole project should be read in a playful and humorous key.

These characters are useful to present the designs in a gallery environment, where it is necessary to quickly present the objects

visually. Though they do work on stereotypes and might be seen to make the project shallow, they



Figure 18 – (Un-) Stable Stool with Engineer Character

also help explain the playful mood of the series. When the objects were shown at three exhibitions, two within the University of the Arts and one during the London Design Week, people were usually drawn to the images first, since the objects themselves looked very common. The audience would then understand that they were meant to interact with the objects, and the object was intended to be approached in a light-hearted and humorous way.

This probably helped with people's perceptions of the objects as well: with this series there is a



Figure 19 – Impolite Coffee Tables with English Granny Character

risk that users will dismiss the objects as being annoying or not intuitive enough to use. If approached in a traditional design way, then users might say that the stool is dangerous, that really the tables take up too much room, and that the lamp is counterintuitive to use. The humorous setting helps explain the aims of the project while putting people in the right frame of mind to approach the objects. When the objects were shown

in this setting, they did achieve the aim of producing a pleasant surprise with the users who were at the exhibitions. It was interesting to discreetly observe how people would approach the objects: they would first look at the images, smiling but not quite understanding what it was about, then they would approach the object and touch it shyly, and then smile and interact with the object more directly, and finally often call their friends and have them use the object.

Conclusions

Timing is essential in storytelling and in all sorts of narrative media and it is integral in surprise. It is therefore essential to understand how this technique helps to create the timing of the surprising experience. To create the right sense of timing it is important that several things happen in sequence during the interaction with the objects and that the surprise is not the one expected at first sight but one subsequent to that. The slightly odd shapes or details of the objects will attract the attention of the user and invite the user to interact with them. In this sense the objects don't necessarily set themselves out to look like they are perfect archetypes, but they set the user off track as to what is actually in store

The lamp is sitting on the edge of the table, so the user will go up to it and touch it and discover that it is made of rubber. The user will then move it onto the table, causing the lamp to turn off, and they will eventually place it on the edge again. The surprise is therefore not in the discovery that the lamp is made of rubber, but in the understanding of the reason why the lamp is made of rubber. In this way the user is being surprised in a moment and in a way that she didn't expect, and she will feel like she understood the object and she is the protagonist of this particular narrative.

In the same way the stool sets the user off in a direction that is not wrong, but lacks the conclusion. When first seeing the stool, because of its proportions and construction, the user will fear that the stool will collapse. What the user does not expect and will discover only through interaction is that the stool is actually usable and quite solid. In this way the surprise is delayed and it is turned into a pleasant surprise that adds an advantage to the object.

The same type of three-step timing is applied to the coffee tables, though the experience is prolonged. The tables start as something quite plain and not really functional, but prolonged use reveals the pattern, which is surprising in itself but also helps make sense of the function of the whole object.

By studying how the user will interact with the object in terms of narrative and what the process of discovery will be, the designer places herself in the role of "director" of the user's own experience. We cannot control everything about the user's experience with our objects once they are out in the world, but studying the basics of emotions can help designers understand what clues can be used to trigger specific reactions, and therefore better direct the user's experience.

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