Goldfish
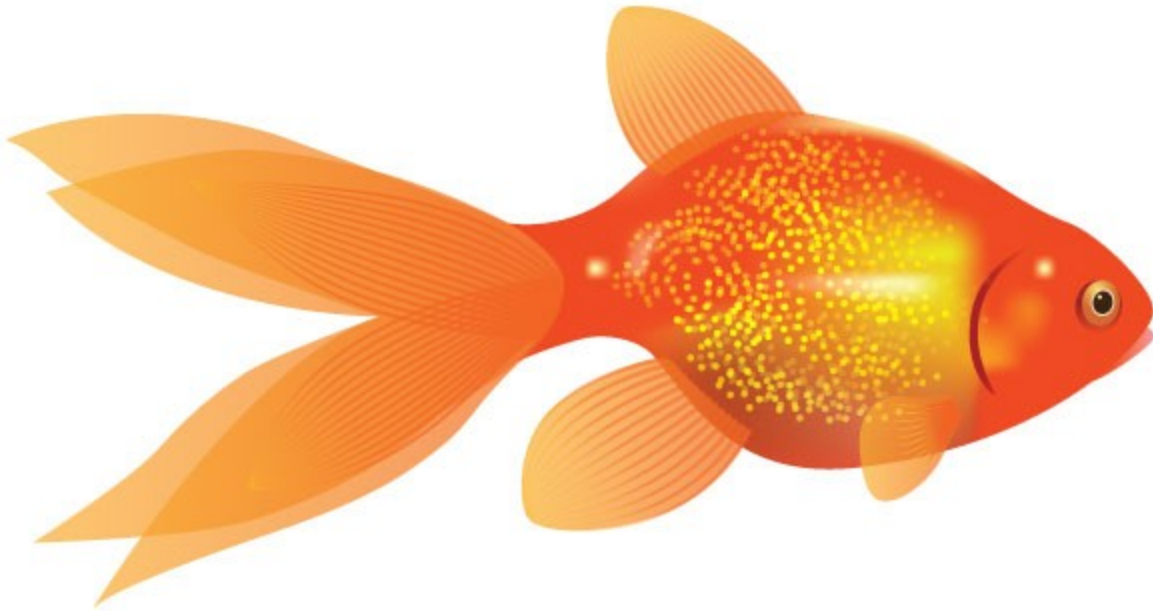A design process
By Robert Wohlforth

The Nature of Contentment versus Satisfaction

I intend to create a product whose primary purpose is to make the user content. To begin, I consider the nature of contentment.

To be content, one has to feel like the world is as it should be. This imperative is not necessary for other forms of happiness. Satisfaction, for instance, merely requires the completion of a goal, the achievement of a specific need in an isolated instance. Many products and experiences address the goal of providing satisfaction. Food, sex, bathrooms and youtube are a few examples. Fewer things afford contentment, but there are still many around us. Everyone needs to be content on some level.

There are several ways of achieving contentment. Shelter, love, hard work, appreciation, familiarity, wisdom and companionship are a few things that may or may not lead to contentment. They all have the potential of establishing for an individual that things are as they should be. They do this by appealing to the individual on an instinctual level, convincing them subconsciously that elements of the

universe are aligned in the individual's favor on a long term basis.

I have decided to focus on the concept of companionship in this stage of the design process, although I intend to bring other forms of contentment into consideration if applicable. This is mainly because companionship is one of the easier of the above to synthesize into a single product, and also one of the easier of these concepts to analyze. Shelter would be an even easier concept to work with, but it would be harder to directly integrate other concepts such as love and appreciation. Additionally, shelter works best at providing contentment in the form of a big ticket item like a house, not as a small item like an umbrella. For this design, I intend to create one inexpensive product that will provide contentment on a scale disproportionate to it's size and price.

Parameters for Companionship

Companionship provides contentment when it occurs over time. However, on it's own it does not provide contentment forever. This product will probably need to be limited in the time that it will last. After the planned self destruction of the product, the user could reevaluate the meaning of companionship in their lives, and consciously make the decision to buy a new companionship product, without feeling pressured by the inevitability of an ongoing commitment. In addition, the self destruction plan would work well as a business model, because it would ensure plenty of return customers. On a practical level, it would also be cheaper and easier to produce a quality product that lasted for, at most, a couple of years, than it would be to produce one that lasted indefinitely.

As for a product actually providing companionship, it does not require as much complexity within the product as one might assume. Companionship, it seems, does not necessitate reactions to the individual which are as logically complex or meaningful as the individual's initial actions towards the companion object. Friendship, in contrast, requires exactly this sort of continuous inverse and equal response to stimuli. In a sense, I intend to exploit the companionship phenomenon, which amounts to a loophole in human nature. To create an object to provide true friendship would be, at this time, prohibitively difficult and expensive. There would be no way to compete with other human's to be the

user's friends.

Companionship requires only that the user be able to sympathize with the companion object. This, again is surprisingly simple. Human's have the capacity to sympathize with anything that moves and has a face with two eyes and a mouth, which also move, preferably in a way that can be related to human facial expressions that signify emotion.

Furthermore, companionship seems to work best when the companion object is dependent. This can be complicated, and will probably be one of the hardest parameters to get right. The dependency is not unlike ownership, in that the companion object cannot have the capacity to not be a companion. Beyond making the companion object less valuable as a product, the capacity for dissonance could potentially have a negative impact on contentment by putting into question the user's character. However, the companionship object must be perceived to have some sort of autonomy in order for it to be personified and empathized with, as well as to establish it as something worth keeping as a companion. Ideally, the object must always be perceived as being content with the condition of being a companion, regardless of it's actual capacity to feel contentment at all.

Obviously, the appearance of this product is going to be a key aspect of it's design. Beyond the requirement of anthropomorphability, the companion object must posses an inherent beauty that will give it importance to the owner. This beauty must be complex enough to appreciate on a long term basis, beyond the complexity that could be found in a painting or sculpture, because it must hold indefinite fascination. The beauty must be temporal as well as spatial. And to inspire companionship, the beauty must afford some level of interaction with the object. However, it is also important that the complexity follows recognizable patterns, parameters or limits, so that it does not inspire a sense of the unknown, and as a result pure unreconciled fear.

The appearance of the product on a more simplistic level is going to be important in it's marketability. The object simply needs to look pretty, so that consumers will buy it on an impulse. With no prior established perception of need for this thing, the initial purchase of it will be more about satisfaction

than contentment.

On this note, the product also should be affordable enough for the price to be negligible. Companionship and beauty, while essential to all humans, are not seen as important criteria for the purchase of everyday things, so the product must be cheap enough for them to buy it anyway. Additionally, people who can barely afford food and shelter have little money to spend on other things, yet they are an important user group to consider, since they have the same needs as everyone else. This is not to say that there cannot be enhanced luxury versions of the item for the rich. Also, the ongoing maintenance of the product, important in establishing a sense of dependency anyway, can also be marketed as an ongoing cost, somewhat hidden in the initial purchase. These costs also must be minimal, however.

Ideally, the product should be usable in many situations, and for things besides it's primary purpose. Perhaps it could store, translate, or calculate information for the user. In a sense, this will already occur by being a companion. Humans often organize memories by establishing mental mappings with familiar objects and experiences as cues. As for actually storing information consciously, it seems that such a function would interfere with the dynamic of dependence, reversing roles and making the user dependent on the companion object in a way that might not result in contentment. However, it is a possibility for consideration.

Perhaps in times of desperation, when physical needs outweigh emotional ones, the product could be eaten. Maybe the product could have some sort of industrial use as well, to increase the scope of its marketability. This could take the form of being programmed to perform a simple task, such as cleaning.

The product must be sustainable, environmentally as well as economically. As an environmental consideration, the product should be recyclable or completable after it is destroyed. It should be easy to dispose of it in an environmentally sustainable way. In the interests of both environmental and economic sustainability, the product should take few resources and little energy to

produce. Ideally, the product should be self manufacturing, so that it's embodied energy is effectively just the energy it uses over the course of it's existence, rather than that of production. For economic considerations, however, this self production could occur only in certain conditions, so that the average consumer would still have to purchase the product. The product should also be easy to store before sale.

Finally, the companionship product should have some amount of durability, so that is is difficult to accidentally destroy before its planned self destruction. Beyond the issue of price, which should hopefully be negligible, the success of the product depends on an emotional attachment to it. Accidentally destroying one's companion could lead to intense discontent.

Given this concise set of parameters, I am ready to begin the design.

Precedence: The Houseplant

All design must have some prior condition from which to develop, independent of the

perimeters for development. Design can't exist without some sort of context, because it is the context that establishes that there is a need for something new. Therefore, I started with a houseplant.

A potted plant seemed like a good place to start because it already meets many of the criteria that I have defined. It does not produce a true sense of companionship, but it comes close. In fact, it seems that all that needs to change is the form, while essential properties of the design can be a close copy. The fact that mobility is restricted to the pot starts to create exactly the right impression of dependence. It is very sustainable and practical in many of the ways that I have outlined, going as far as collecting it's own energy from the environment around it. It is very cheap, but also comes in deluxe versions. It is beautiful on a complex level, although not necessarily in an interactive or temporal way – this will need to be improved upon. It seems like all that it needs is to move, and be identifiable as something like a human.

Prototype 1:

This prototype attempts to use a close physical resemblance to a human face to inspire the empathy of the user. It uses photosynthesis to collect nutrients, so there is no risk of forgetting to feed it. However, in user testing, the test subjects simply took one look at the product and ran screaming the other way. The product seems to fall into what has been called the "uncanny valley," looking too much like a human to the point that it is identifiable as a threat. Because it is human-like, it looks like it has some level of autonomy, and therefore not sufficiently dependent to meet the specified parameters.
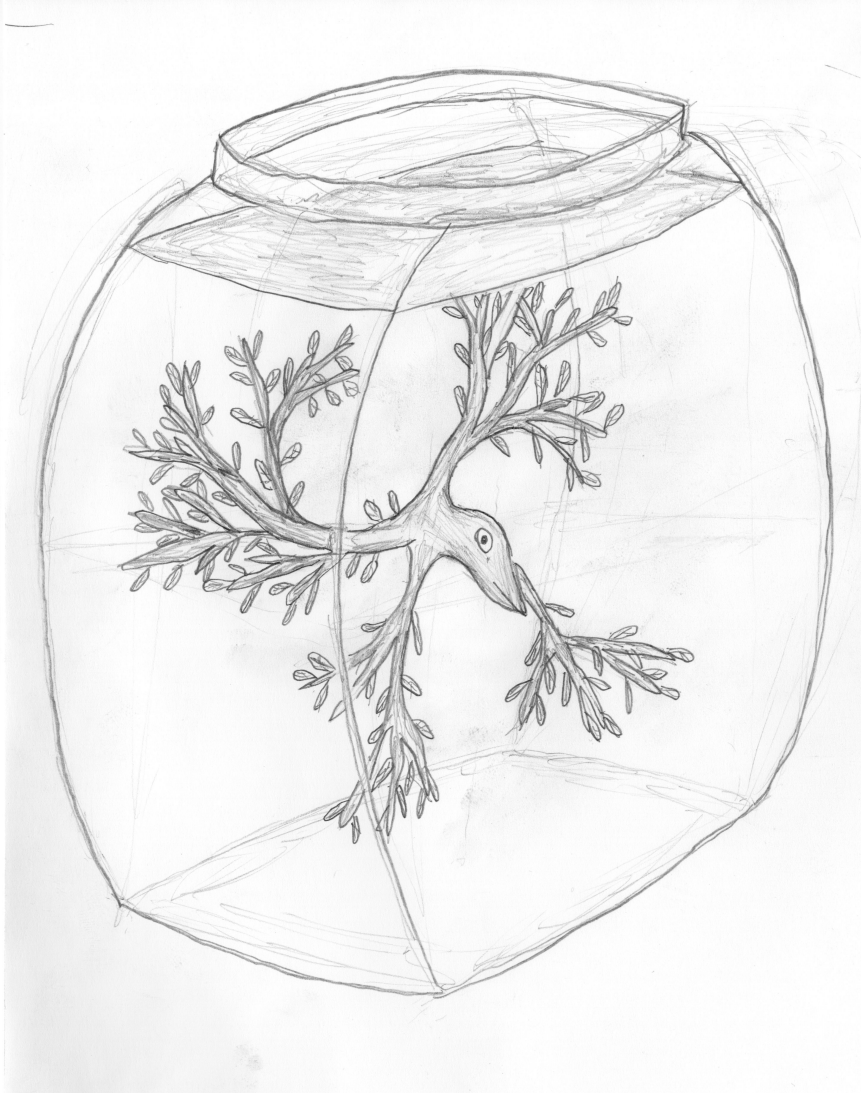
Prototype 2:

      This prototype reduces the face down to a size that is not frightening or overwhelming, and makes it less human. Now, the product is accepted by users as a companion. They are eager to keep it in their home, and will look at it and water it. However, movement has become a problem. If the companion object does not move, like the plant that inspired it, it is just as easy to forget, and will not be interacted with. However, if it does move, it's actions are unpredictable in intention as well as scope, and therefore frightening. Users are not sure what it is doing when it moves it's branches or head, and don't know what it might be capable of.

Prototype 3:

With this prototype comes the new idea of placing the companion object into water rather than soil. This solves the mobility problem, because it limits the scope of movement visibly, so that users can be comfortable in knowing the terms of their interaction with their companion object. Within the water environment, it can move freely, drawing the interest of the user. However, this solution brings about problems as well. Because the product already has all the water it needs, and can perform photosynthesis with its leaves, it has no real dependence on the user. This makes it not as interesting of a companion, and it is even easier to forget about it. Also, it limits it's use to places with sunlight. Additionally, the perceived purpose of the leaves in ambiguous, making their erratic movement in the water discomforting.

Prototype 4:
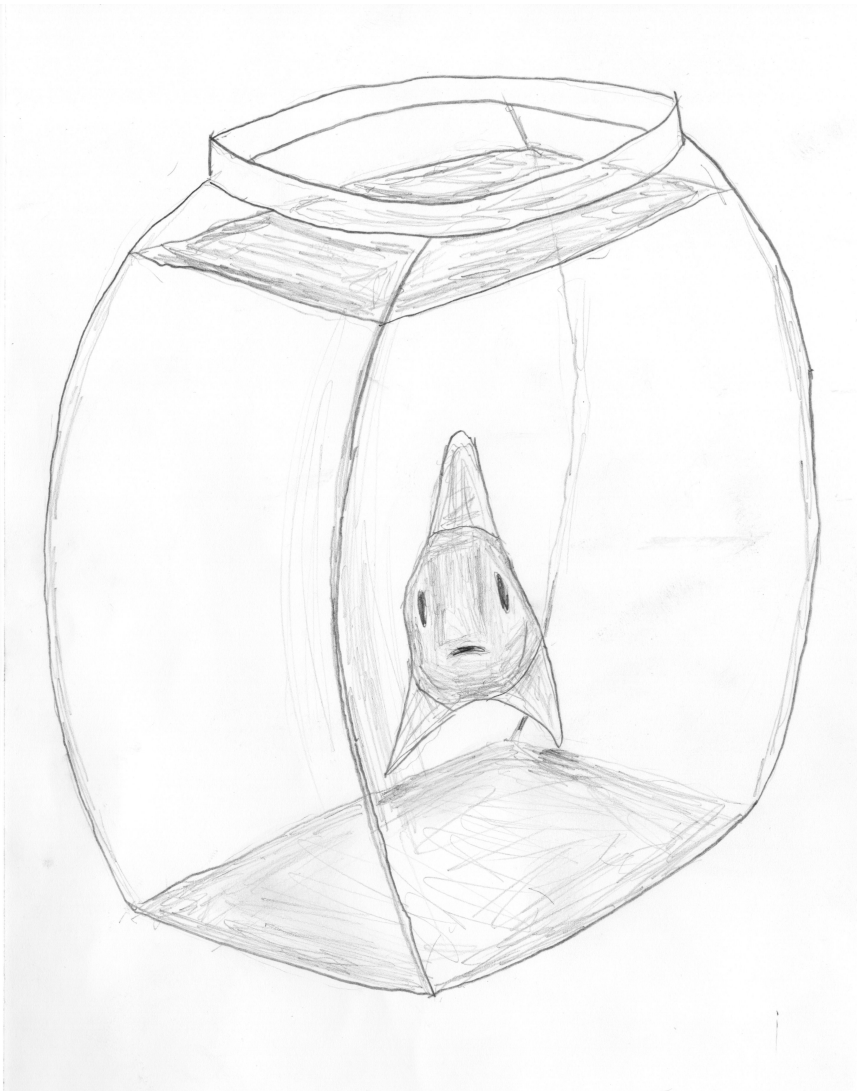
      In this iteration, the leaves and branches have been removed, so that the companion needs to be fed to survive. They have been reduced down to simple fins, whose movement is predictable, and which will not catch on things. This iteration fits most of the parameters required of it. However, there are still some minor issues. As a flat, almost planar object, it has lost the complex beauty that the leaves gave it. As such, it is no longer as interesting to the user, and will not capture prolonged attention. Also, the lack of directionality in the body makes it unable to maneuver well in the water, limiting the scope of interactions with the user.

Final Product:

The final iteration of the design has satisfied most of the requirements. The fins have been extended to become more complex, and there is a sense of directionality to the movement. There are, of course, a couple of issues that will remain unresolved. The product can be eaten accidentally by animals or clueless users. The product can still be left and forgotten somewhere, leading to it's destruction. The product requires that it is in water at all times, and the water must be cleaned occasionally to insure that the product stays working. That being said, this version is a satisfactory solution to the design problem.