



'It's rare to flick through
a book of product
design and find that
you want to own –
that you *need* to own –
almost everything in it.'

– Creative Review

phaidon.com



NAOTO FUKASAWA

PHAIDON

*The world of art, creativity and fantasy has always been kept secret,
never revealing (providing it's known) how an idea is born,
how an artwork is constructed ... I, however, think people
want to understand, so I shall attempt to explain.*

BRUNO MUNARI, *Fantasia*, Editori Laterza, 1977

Designers don't generally like to tell people how they get their ideas;
I suppose we'd prefer merely to share the tacit meaning of those ideas with
the public. Though, of course, we must be willing to accept slight discrepancies
in the perception of that meaning. In writing this book, Bruno Munari's words
have encouraged me to set forth honestly what I was thinking when making
each work, and under what circumstances it came to be.

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Without Thought

NAOTO FUKASAWA

Appropriate solutions

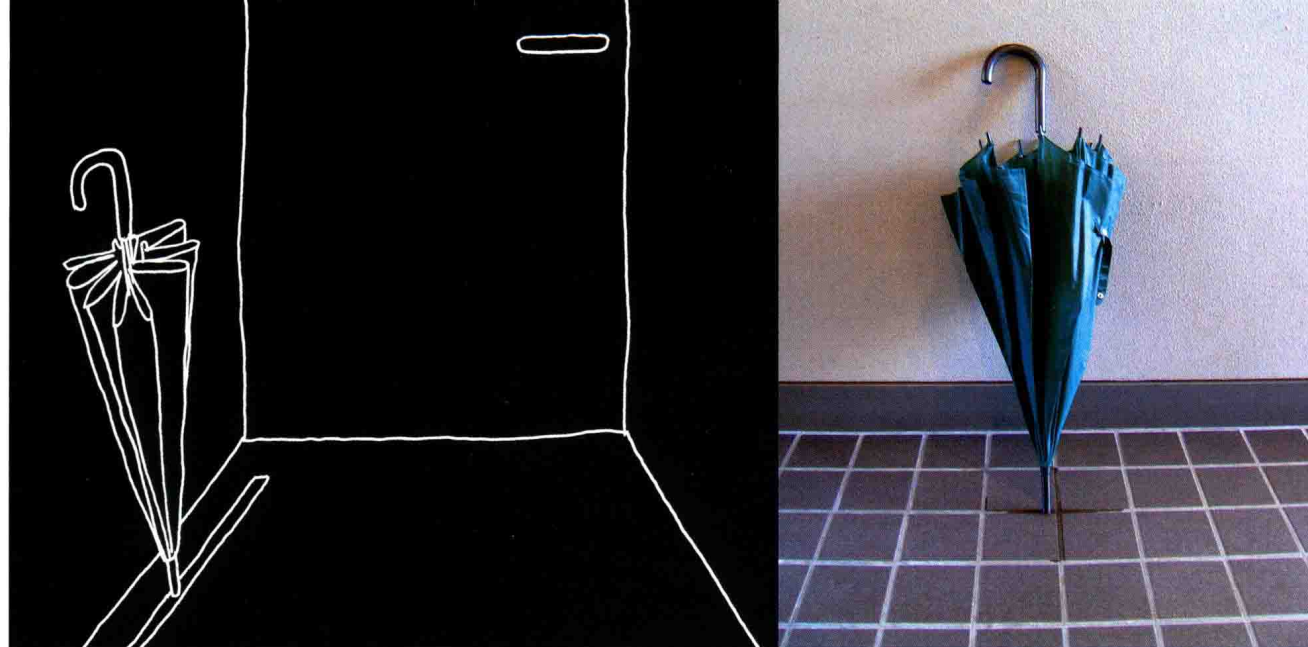
In the course of putting together this book, I realized how very diverse my inspirations are. While I imagine the general reader hopes to find some underlying thread, whether particular forms germane to the designer, tendencies suggested by certain materials, special techniques derived from hands-on creative processes, or an attempt to express some latent mechanism or new phenomenon – one might look for any number of things – my designs yield no such unifying principle or obvious continuity.

There was a time when I myself sought the 'single thread', until I realized how stifling that brand of consistency would be. No, rather than impart my own 'flavour' to each design, I opted for clarity of ideas. Very probably, it was then that I first really began to elicit solutions appropriate to situations: shapes to meet comfortably all the various conditions that factor into each set of circumstances; or put another way, shapes that seem to come about naturally, where I've actively factored out my own willful 'I propose this' signature. Indeed, more appropriate solutions happen when I as designer stand on the side of the public and objectively identify with end-users' 'if only there were something like this' wishes. The sensibility here is that design isn't something that I generate, so much as something that already exists *in situ*; all I do is give it concrete form.

The end-users know all the various different parameters that will determine the appropriate solution without ever realizing it. This is why vague notions of 'if only there were something like this' never result in a concrete image, and also why, whenever they do find a good design, they invariably remark, 'I've always wanted something like this'.

Without thought

In 1998, I held a design workshop entitled 'Without Thought', in reference to my observations at the time of how people unconsciously handle material objects. Within the conventional view that design exists to stimulate awareness, the concept 'without thought' surely proved difficult to grasp for both designers and laypersons. While still toying with the title, I asked two



friends who were visiting Japan at the time – Bill Moggridge, founder of IDEO, the American company where I formerly worked, and Bill Verplank, a pioneer in the then-emerging field of interactive design – what they thought about this: ‘Someone comes inside and, finding a tiled floor and no umbrella stand, merely props his umbrella against the wall with its tip in the 7 mm grouting between tiles, a very common unconscious act if there ever was one. What words would you use to express that sense of unconscious behaviour?’ Both replied at once, ‘Without thought’. ‘What about “thoughtless”?’ I asked, not quite sure of my English nuances. No, they told me, that implied an inconsiderate, even unkind attitude. Very well, ‘Without Thought’ it was – yet at the same time, I found myself imagining that a similar 10 mm groove in an entry-hall floor about 15 cm from the wall would make a fine umbrella stand. Visitors would come in and, short of any obvious receptacle, plant the tips of their umbrellas almost automatically there in the groove. One could design an umbrella stand that would allow people to stand their umbrellas without the customary cylindrical apparatus. With design and purpose accomplished, the physical object disappeared – which in turn led to the next design workshop, ‘Design Dissolving in Behaviour’.

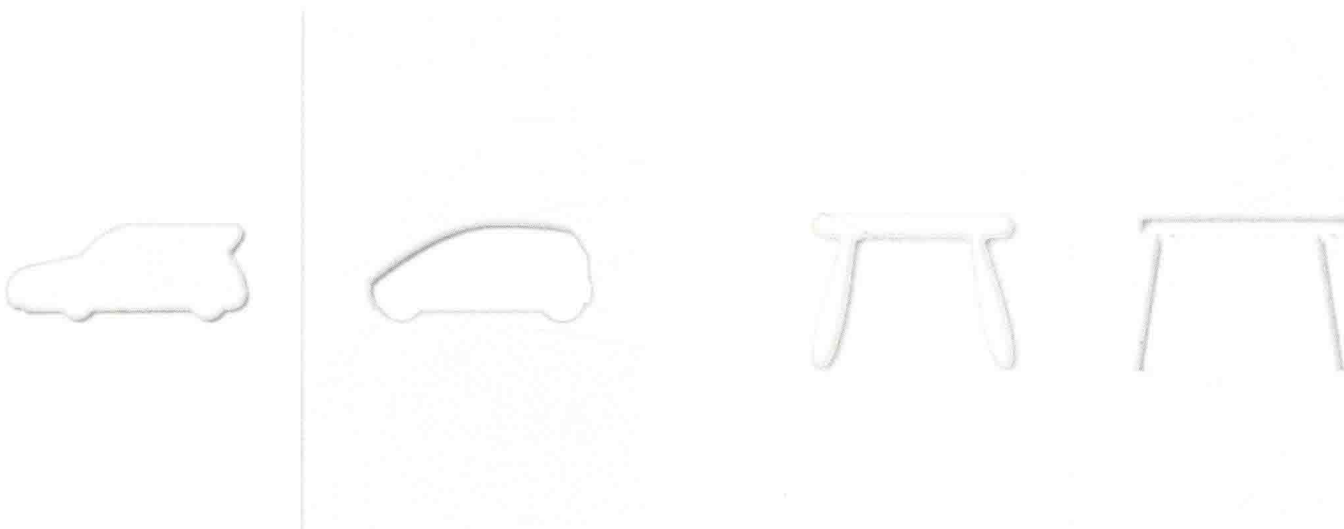
In such dematerialized design thinking, a groove can be an umbrella stand, and that umbrella stand might literally dissolve in the course of people’s actions. The functional provisions for those actions might not be immediately apparent, but quickly come to the fore when people perform those actions without thinking. Thus, handholds on branches and rocks grabbed unawares while climbing a steep mountain trail get polished smooth, since most hikers grab the same places. Within the given circumstances, the position of branches and rocks in the environment offer identical advantages to everyone. These points unconsciously become foci of awareness, nodes in the flow of activity. I believe that design consists in searching out those common points, where beautifully fluid, unthinking activity and awareness concentrate as they pass through, then finding the optimum shape to be placed there.

While many today aspire to stimulating design, too much stimulus is not a good thing in anyone’s life; stimulus inevitably interrupts the unconscious flow of activity by provoking conscious attention. Rather, in my view, an unconscious, harmonious accord of people and things is best conveyed ‘without thought’.

Design outlines

A design outline is exactly that: the outline of an actual object. This is also the outline of the surrounding space, the outline of a hole left in space by removing the object. Design consists in finding that outline. This generally has less to do with seeing the outline of the object than discerning the outline of the hole that it will occupy in the environment – an outline determined by all the various factors that make up the environment, including human emotions and behaviour, time and light and air; an outline that is in flux.

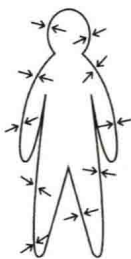
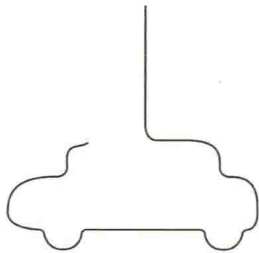
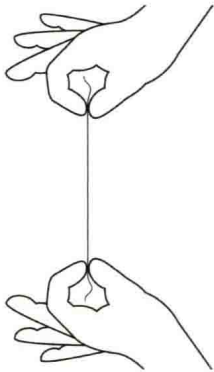
There are two ways in which to interpret outlines: we can either see an object as a jigsaw-puzzle piece and trace its outward perimeter, or we can scan the whole puzzle, looking for the hole to be filled by that one piece and follow its inward edge. The shapes may appear identical, but their interpretations differ drastically. The various other puzzle pieces already in place are the component factors that make up a design – factors relating not only to the present time and culture, customs and technologies, but also to lifestyles and circumstances of use. And, of course, we must also include all the people involved, their mental and emotional makeup, client thinking and brand philosophy, trends and fashions, competing items, and countless unnoticed things that surround us like the particles of air we breathe. The hole, then, is the requisite shape formed by all these factors.



If the outline of the hole is readily apparent, all that remains for us to do is cut out that shape with a pair of scissors – but it's a shape that a designer wouldn't usually set out to make. If instead we try to create some desired 'signature design' or 'designer look' without sizing up the hole and its inward factors, the resultant piece probably won't fit. No matter how much we like a shape, there's no point in making something that won't go where it's supposed to fit. People, on the other hand, generally know where there's a hole, which is why they can tell when a new design seems 'just right'.



Jigs for generating the outlines of things



Even if the hole is obvious, we still need good cutting skills. Scissors that don't cut properly can never create the perfect fit. Better to trim and correct and trim again, little by little. That's what takes the time; that's the real work in design, what ultimately makes a design outline.

Puzzle pieces exert forces upon each other's outlines without even touching. Design concerns not just the shape of an outline, but determining the correct forces. We can do this with a single line. If possible, we should avoid designs where there's too much force on the inside, always pressing the outline outward; what we really want are opposing forces to balance inside and out, never making too strong a statement, so as to shape a fine, resilient line that doesn't show its forces outright.

There are design outlines that only gradually float into focus when we look hard, and others that suddenly crop up in the middle of familiar, everyday scenes. Either way, they are otherwise unseen realities. Just like constellations that blink into view amidst countless stars, shapes created in human memory by very real entities out there in the cosmos, these outlines are based on recollections that people share in everyday life. Such connect-the-dots lines, seemingly drawn out of nowhere – 'invisible, but easy to see now that you tell us', you might say – such images rendered from our ordinary unconscious experience are the very essence of design.

It's the designer's job to extract the parameters that make an outline, factoring in each little star twinkling far off in the darkness. People don't notice that those tiny dots of light even exist until they form part of an outline, yet once they see the configuration, the realization can be profoundly moving. Sometimes the momentary gleam of a single star can point the way to an unprecedented outline. And since the parameters may be interspersed back through time and across a breadth of cultures, the outlines are typically not flat but volumetric, revealing changing aspects according to the viewer's movements and feelings. Thus, we recognize an outline as that constant shape of unchanging elements embedded within changing images, just as we recognize the table that everyone sees from different angles as one-and-the-same table.

Outlines can form immediately when elements that are obviously appropriate to the circumstances are identified from among all the diverse possible parameters in daily life. Often an outline is best seen from outside. A hand to the wall tells us right away that we're touching a wall, but we usually don't notice how the wall offers up a hand-shaped perception. Finding that right outline is no simple achievement; there's nothing clear about it. Like a flounder on a sandy sea bottom that only reveals itself in motion, an outline comes together 'here' and 'now' only when things move.

We grasp at unseen textures. We reach for the space around visible objects. We try to ascertain networks connected via imperceptible threads. Design neither aims to show what can't be seen nor, however receptive the public, to instill any unduly keen awareness. All that the designer needs to do is find the right outline for the given conditions.

By tracing the surrounding space, what should exist there comes into view. To draw an outline in thin air with no relation to the surrounding space would be like looking at the sky and depicting imaginary images without ever seeing an actual star. No, the parameters that make up a design outline are very real and common to everyone's perceptible experience – which is why we all already know the outline, but simply haven't realized it yet.

Environment determines behaviour

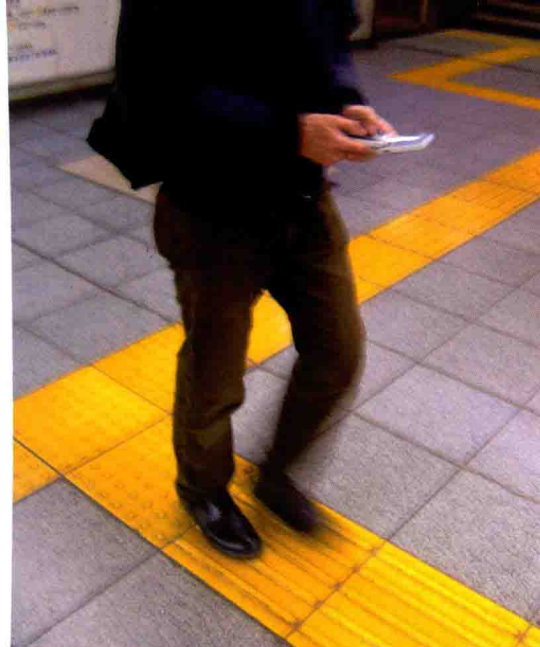
The photo shows an empty milk carton placed on a roadside railing. The square bottom of the milk carton matches the square shape of the railing post. Coincidence? It's as if the moment the person thought to discard the carton, his or her hand was magnetically drawn to this square spot. People like to think they decide everything they do, but this photo argues that our environment (in this case the square railing post) may also move us about, hand and body.





Another photo: here, someone has used the Braille plate on a stairway handrail in a train station for an ashtray. Such guide plates are often affixed in public places in Japan as a courtesy to the sight-impaired; hence extinguishing one's cigarette there shows the worst 'thoughtless' disrespect for others. And yet, in terms of functionality, the embossed, Braille bumps and long, trough-like shape actually suggest the best possible spur-of-the-moment place to put out a cigarette.





Still another photo to the left: with the spread of text-messaging and internet access via mobile phones, one frequently sees people concentrating on their handhelds while walking along the bumpy safety-line tiles in Japanese train stations. Originally designed to warn the sight-impaired not to go too close to the edge of the platform, these tiles now more often function to help the average commuter, as previously dormant memories in the soles of our feet become sensors to aid us in 'walking blind'.

Relationships between people and things are never constant. When some new item arrives on the scene, it creates a whole new relationship. As our environment keeps changing, people look for the most useful values (functions) to meet each fresh circumstance. One might call that on-going process 'behaviour'. Even the simple act of walking is informed at each and every step as we continually pick up on ground conditions and find the most appropriate spots in which to place our feet. One sees prominent traces all over town of how people have sought out distinct values on the spot.

The photo below shows a bicycle basket used as a wastebasket. Once the chain is started, one piece of rubbish in the basket invites another, until the basket fills. Is this merely irresponsible behaviour, expecting the bicycle owner to do the dirty work? Or is it because of the uncanny resemblance to a real wastebasket? Very likely, it's a combination of factors – an unmonitored location, an accessible position, the height in easy reach – that elicit this one common behaviour.





In the photo above we see how naturally the situation of having to wait for a bus determined a seating position. Were it wholly unrelated to the bus stop, the bar would surely have bent towards the middle. Conversely, if the bus schedule were shifted another 30 cm to the right, the sag would cease to be the one common position of choice.

In just this way, our environment offers us countless circumstantial values, which we continually pick up on, situation by situation. And the most fascinating part is, we are virtually unaware of these actions. Given that people's behaviour varies with the environment, it follows that shaping that environment through design can potentially change how people behave.

Selection pressures

To the left we see three men standing by a wall, the distance between one person and the next seemingly fixed by some invisible force-field radiating from each. Say, for instance, the man in the middle and the one on the left were there first, their spacing would then determine where the third man positioned himself. If the third man stood any closer to the man in the middle, the latter would undoubtedly feel uncomfortable, as if something were out of place. Thus, people's behaviour is also determined by mutual pressures. And these pressures are not just between people: they compound between people and objects, people and buildings, one inside another, expanding and contracting like an intricate elastic net.

Here in Japan, the situation compacted under the greatest person-to-person pressures must be the crowded rush-hour commuter train. To be packed in that crush of bodies yet maintain some kind of order, we can only give ourselves over to the rocking of the train. If just one person were to go against the swaying motion, that extra measure of force, added unilaterally to the



physical contact, would not only increase the immediate recipients' discomfort, but would throw the whole car into disorder. The order would break down, not because bodies were thrown together, but because that added increment of force embodied an individual will. Tree leaves never tangle, because nature keeps things in order. Perhaps humans do not create disorder per se, but only through conscious will.

Apparently there is a term, 'selection pressure', in genetic-evolution theory, which refers to how readily the genes of less fit individuals will be selected out or eliminated from the next generation. Transposing this idea into the world of design – yes, there is a survival of the fittest among designs – we may say the designs that have been around longest have a high degree of fitness and are subject to relatively low selection pressures. Those designs that have been selected out must have had an errant element that disrupted the order of things – perhaps some visible trace of the designer's own self-consciousness? – or an exciting aspect that made people too aware of the unconscious flow of their actions.



