

# HAPPY IS UP SAD IS DOWN

65 metaphors  
for design



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The Whole Book in One Picture **INSIDE BACK COVER**

# Metaphor is not only a linguistic device.

We use metaphors to think and talk about one kind of thing in terms of another.<sup>1</sup> When we talk metaphorically, we often use words describing basic physical properties to express something more abstract: judgements, emotions and values. When goods become more expensive, for example, we say *prices are going up* – but the price tags stay in the same place. When someone is friendly on the first encounter, we say *they gave*

*me a warm reception* – even if we met outside in the freezing cold. When we have an honest conversation with someone, we might say *thank you for being straight with me* – even though we are both slouching on the sofa. Metaphors are omnipresent: around 12% of our words are used metaphorically.<sup>2</sup> Most of these metaphors are dead; we do not realise that we are using them.



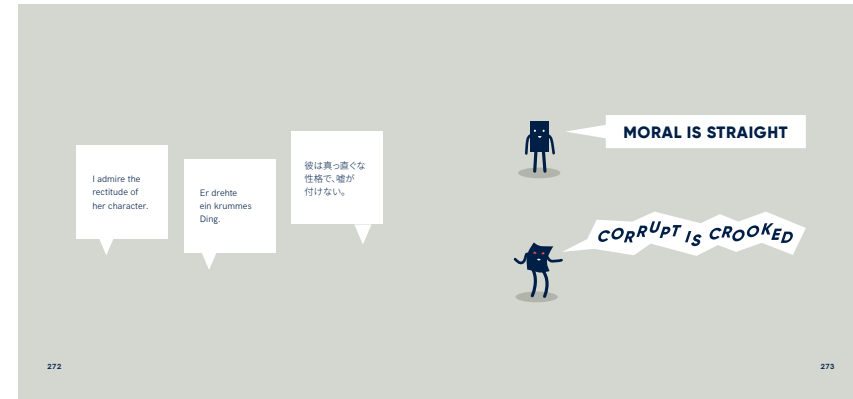
## This book is for designers ...

and user experience researchers, marketers, human factors specialists, linguists, psychologists, philosophers – basically everyone interested in how the mind works and how to apply this knowledge to understand and change the world.

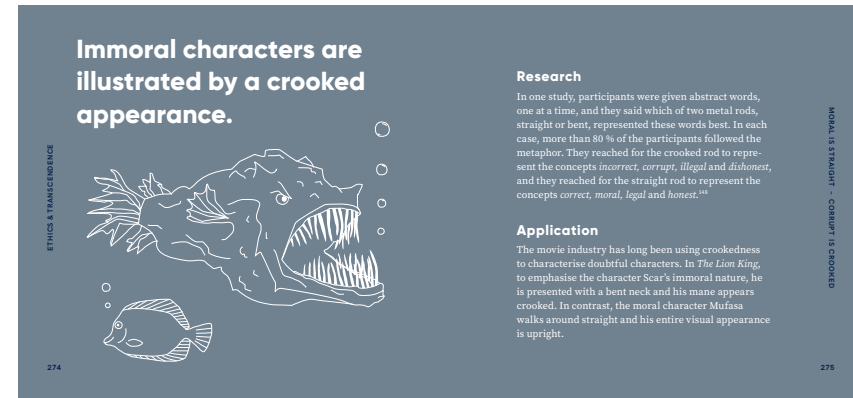
The book contains a collection of 65 primary metaphors to be used as inspiration for creating physical and digital artefacts that intuitively communicate abstract ideas by using physical and spatial means. To make the metaphors easy to find and readily applicable, we have clustered them into seven groups: Basic Units, Basic Judgements,

Emotions, Social Relations, Knowledge & Communication, Economics & Politics, Ethics & Transcendence. A graphical overview at the end of the book shows which physical properties are connected to which abstract concepts.

In the main part of the book, each metaphor is introduced on two double pages. The metaphor names follow the structure **ABSTRACT TARGET DOMAIN IS PHYSICAL SOURCE DOMAIN** to show how the abstract and the physical are connected, e.g. **MORAL IS STRAIGHT - CORRUPT IS CROOKED**. Each initial double page (1) illustrates the metaphor and shows how it is expressed in three languages (English, German and Japanese).



(1)



(2)

Each second double page (2) presents research indicating the intuitive nature of the metaphor.

It also shows examples of applying the metaphor that can be real or speculative.

1

# BASIC UNITS



The shop is  
closed from  
1 to 2 pm.

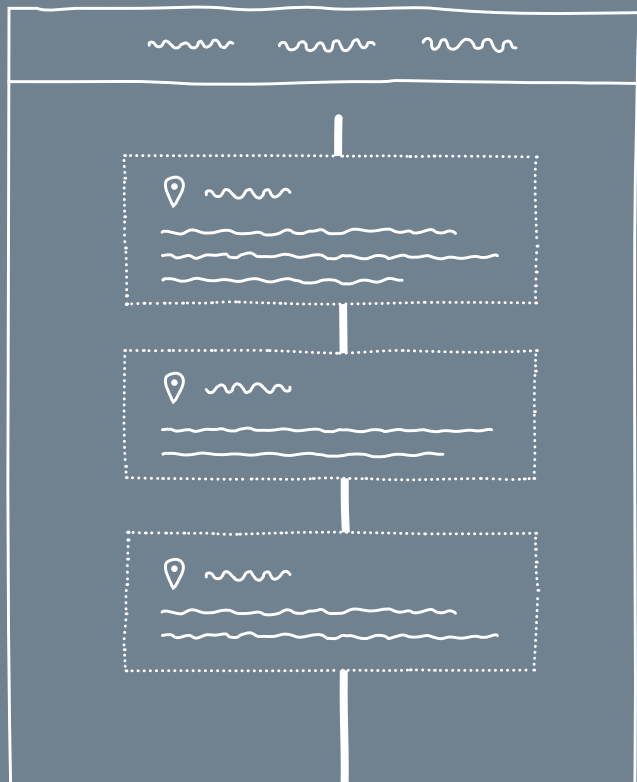
Die Veranstaltung  
geht von 12 bis  
14 Uhr.

1時から2時まで  
休憩にしよう。

## TIME IS ON A PATH



# In social media, posts move along a timeline.



## Research

We think of time as extending on a path. In Western cultures, this path is usually horizontal. We use it in writing and in gesture. When talking about future events, for example, we make forward or rightward gestures. When talking about past events, gestures go leftwards or backwards.<sup>18</sup> Arabic speakers, in contrast, tend to put past events in the front and future events behind<sup>19</sup> and for Mandarin speakers, the future is down and the past is up<sup>20</sup>. In most cases, the direction of the mapping can be explained by the dominant writing direction. In other cases, specific cultural preferences play a role.

## Application

Historical diagrams extend the time from left to right. Calendars typically use timelines that extend rightwards and downwards. Analogue clocks feature a circular timeline. But time is always on a path.

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# EMOTIONS





I'm feeling up today.

Kopf hoch!

愛犬を亡くしてから、  
ずっと気落ちしている。

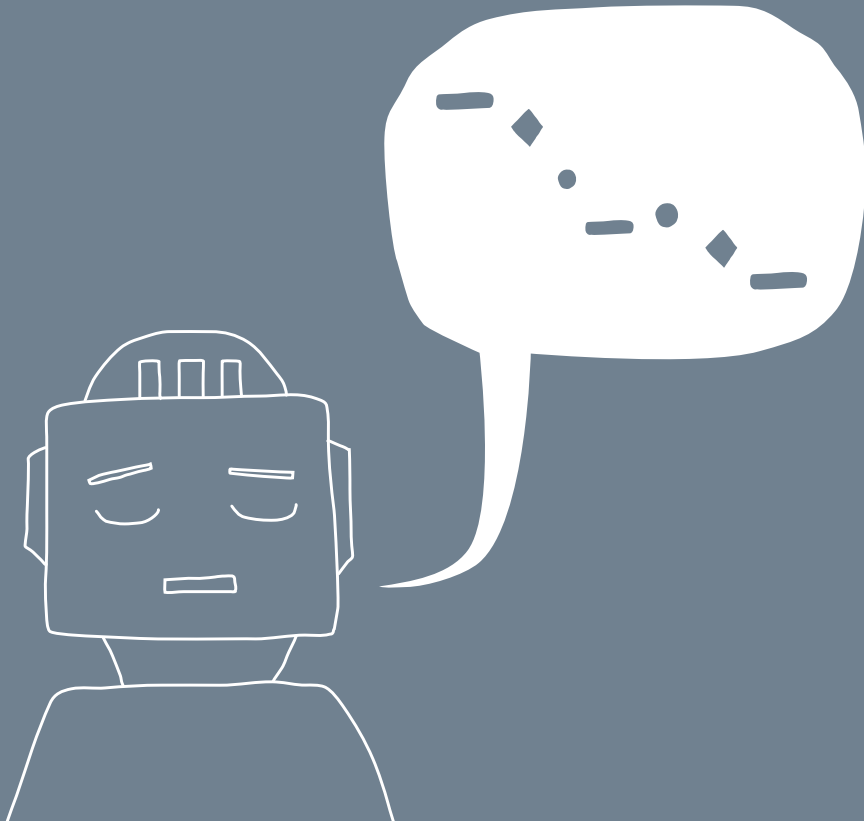
**HAPPY**  
**IS UP**



**SAD IS**  
**DOWN**



# How does a sad robot sound?



## Research

If someone is sad, their head is hanging down. A cross-cultural study shows that this emotional expression is internationally valid: Japanese, Sri Lankan and American participants recognised the postures of a digital manikin as sadness, when its head and arms were hanging down.<sup>74</sup>

## Application

Musical pitch is also mapped to vertical space. Thus, to express sadness in a robot, it can make a falling beeping sound, helping users to identify the robot's emotional state.<sup>75</sup>

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# KNOWLEDGE & COMMUNICATION



Is there any-  
thing you can  
tell us that may  
shed light  
on his death?

Sie ist ein helles  
Köpfchen.

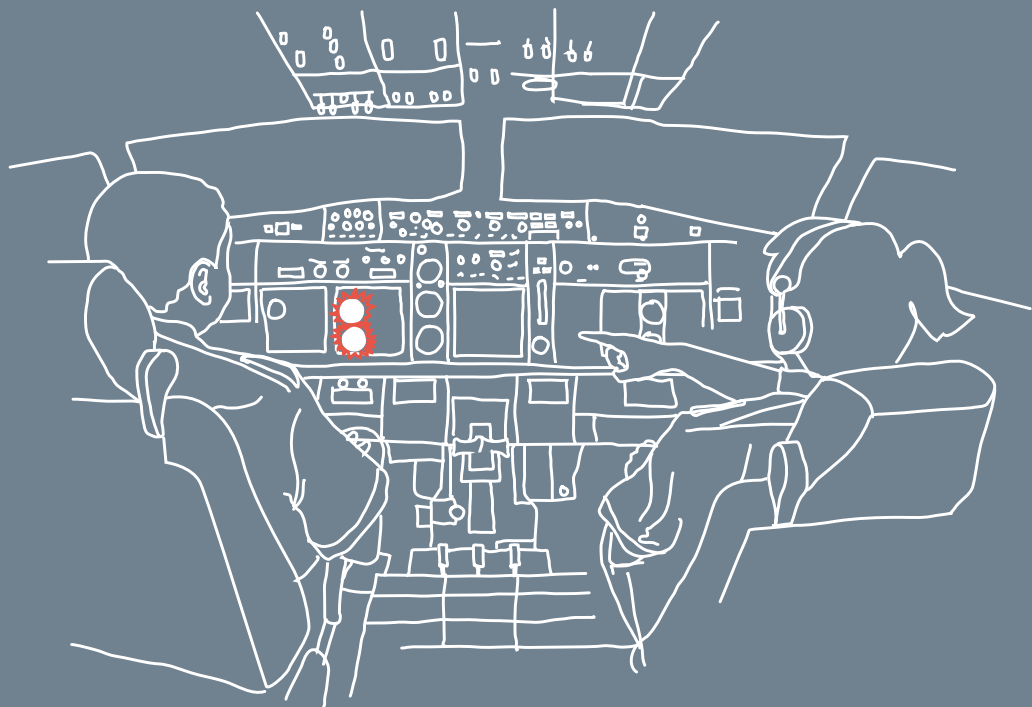
事情に暗いので  
黙っていた。

**KNOWING IS  
BRIGHT**



**UNKNOWING  
IS DARK**





**See? That's  
what I mean.**

## Research

People are primarily visual animals. In the dark, we cannot see and thus are prone to stumbling and falling over. This leads us to associate brightness with knowledge, wisdom and good, and the dark with ignorance, fear and evil.<sup>113</sup> The metaphor generalises to intelligence as a personality trait: there are *bright physicists* and *dim-witted radicals*. Experiments have shown, for example, that images of open books with bright backgrounds are rated as more likely to represent works of genius than books with darker backgrounds.<sup>114</sup>

## Application

When *fly-by-wire* concepts emerged, human-centred aircraft design turned to the *dark cockpit* philosophy. The cockpit displays should remain *dark and quiet* – unless there is something the pilot needs to know or pay attention to. Then that specific control will light up and show its information. Although widespread, this design philosophy has been criticised. If there is a serious incident, there is too much information in the dark for the pilot to get a proper overview of the situation.

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# ETHICS & TRANSCENDENCE



No one  
involved in the  
conflict has  
clean hands.

Sie arbeiten  
mit schmutzigen  
Mitteln.

身の潔白を  
証明する。

**MORAL**  
**IS CLEAN**



**IMMORAL**  
**IS DIRTY**



# Dirty hands? Wash away your sins ...

## Research

In a highly regarded study, participants lied to a colleague or told the truth, either by email or by voice message. Afterwards, they rated the desirability of several products. It turned out that hand sanitiser was particularly desirable after lying by email and mouthwash was particularly desirable after lying by voice mail.<sup>144</sup>

## Application

Did your parents ever threaten to wash your mouth out with soap if you talked dirty? Have you ever wanted to clean your hands after an immoral act? This could be an opportunity for drug store ads. Do not wash, however, after doing something virtuous and the good feeling can prevail.



MORAL IS CLEAN - IMMORAL IS DIRTY



# We think, feel and talk in metaphors. Why not use them for design?

*Feeling down? Cheer up!* We use metaphors every day and often without being aware of it. Many metaphors are more than figures of speech. They reflect basic bodily experiences and help to structure our thinking and experience of the world.

We have put together 65 metaphors with research facts and applications in product and interaction design, information graphics and advertising. Metaphors show how to use space and physical attributes to convey abstract concepts like time and importance, emotions and social relations, political ideas and ethical values. This book is meant to inspire designers and everyone curious about how the mind works.

**BIS**

