# TUDelft

Delft University of Technology

## Collage for Designers
## Invent, Involve, Inspire

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Dedicated to **Mirjam Peters**

# Contents

## Preface

Why do we need a manual for something a two-year-old can do? The basic techniques of collage like tearing, cutting and gluing are so simple – and materials can be found anywhere for free – that it seems rather pointless to pour out a lot of words about it. However, this manual is only partially about these techniques (yes, there are some tricks, you don't know yet); it is more about the way designers could use them to express themselves and communicate in images.
In comparison with spoken language, it is quite clear that for writing a note, an essay, a novel or a poem you need more training than for reproducing 26 different letters. Selecting image fragments and rearrange them to form new meanings and expressions of character, qualities and emotions you want to convey is something that requires training.
To apply these skills in the design process in an exploring, communicating and inspiring way, they should be mastered to a proper level..
This manual will help you to reach that level. Although the language of images is a universal means of expression, we will focus on typical designer skills.
To designers, students and teachers this guide will offer useful starting points and training methods.

*ill. 1*
*Christmas tree by Sari May,*
*2 years old. Made under*
*supervision in crèche.*

*ill. 2*
*Photograph by Fubiz. Not a collage, obviously, but an image of high, poetic value. The atmosphere is easily recognized. With only a few image elements, it's simple composition and fine balance tell a story without words.*

## How cool is that!

Imagine, you're going on a journey. Even if exploring new and unknown areas is a thrill to you, you will be looking for information about the place that you're going to. You will look for a map to see where exactly this place is. And you want to be prepared for circumstances over there concerning climate, shelter and so on. But more likely you will search for visual information. Probably, the first thing you will do is google for images of your destination. And probably Google will answer your first request with hundreds of pictures of where you may be going. Good for you, this will ease your mind. You now have an image in your head. You can go now and see if it matches with 'the real thing'. But what if your screen remains blank or gives you only a few hints of similar places? Well, in that case, you will have to go exploring!

The design process may well be compared with such a journey. Your client wants to go to new places, design a new product, providing new opportunities and they're asking you to be their scout, to guide them there. Obviously, you will deliver quality design work in the end but your task will also be to image these opportunities, this product that does not exist yet. Along the path of analysing the problem, mapping restrictions and requirements and proposing solutions, you will have to take care that the image, in the end matches the vague picture that's in the client's head. In the preface you read about poetry, now check this definition:

> *Poetry: "A literary form, used by poets when they reflect on atmosphere, moods and feelings, preferably with few words"*

How (future) users think and feel about a product, what personal possibilities and meanings they recognize in it, is largely influenced by its 'looks'. The user sees more than the product as such and you could say that each product, besides

*ill. 3*
*Collage by Joana Portnoy*
*Task: Make a beautiful greeting card for a non-specific occasion. Give special attention to composition and balance. If there is a simple task to meet, there is a lot of poetic freedom. In this case, the reduction of form elements contributes highly to that result.*
*One of the nice things about collage is that it enables you to find and use poetic freedom in your product design.*

its functional and constructive qualities, has a poetic quality. To organize these 'looks', even when there is a specialist or a stylist as part of the design team, is one of the typical tasks of a designer. Alongside all their responsibilities, designers should be able to understand and manage this process too. Therefore, an educated designer can think and do, but has to be trained also in 'feeling', in the recognition and creation of immaterial values. So, as a designer, you're a storyteller and you'll set out the storyline. Besides a 'tour operator' you should also be guide and companion. Apart from an engineer, you will be a 'visual poet'.

*ill. 4*
*Drawing/collage by Georges Braque.*
*The use of newspaper clippings is typical of the*
*work of this 'cubist' painter.*



*ill. 5*
*Collage by Kurt Schwitters. (±1923)*
*The single use of 'papier trouvé' for a work of*
*art must have been rather sensational, some*
*100 years ago.*

## Getting there

From the introduction, you might conclude that collage is a form of art. Well, it's not. But you can certainly call it an art medium. As there is no room in this manual for an extensive discussion about art, we give you this comprehensive definition:

> *"Art is stylized, human activity that evokes emotion"*
> Gerard Reve (1923–2006), writer

### DESIGN VS ART

Since the introduction of photography and (industrial) print, artists have involved printed fragments in their work. Painters such as Pablo Picasso (1881–1973) and Georges Braque (1882–1963) may have been the first to do so; Kurt Schwitters (1887–1948), one of the founders of the Dada movement even chose the medium of collage for the main part of his oeuvre.

Design, however, is mostly about a (vague) idea or a question that, during the process becomes more concrete and is then (finally) answered. During a decent design process, ongoing communication is needed between all stakeholders and it may be clear that images can play a most important role in this. Think about agreements that client and designer should reach regarding the appearance, the intended context and the desired experiences of the product to be designed. These are all subjects you cannot agree upon on a completely verbal basis. Illustrations to these criteria will certainly contribute to the discussability of design issues in an early stage of the process. And later on, during this process, studies on visual possibilities and consequences can contribute to a clear communication between stakeholders.

Differing from the artist who creates autonomous images to be presented to the public, a designer is a serving
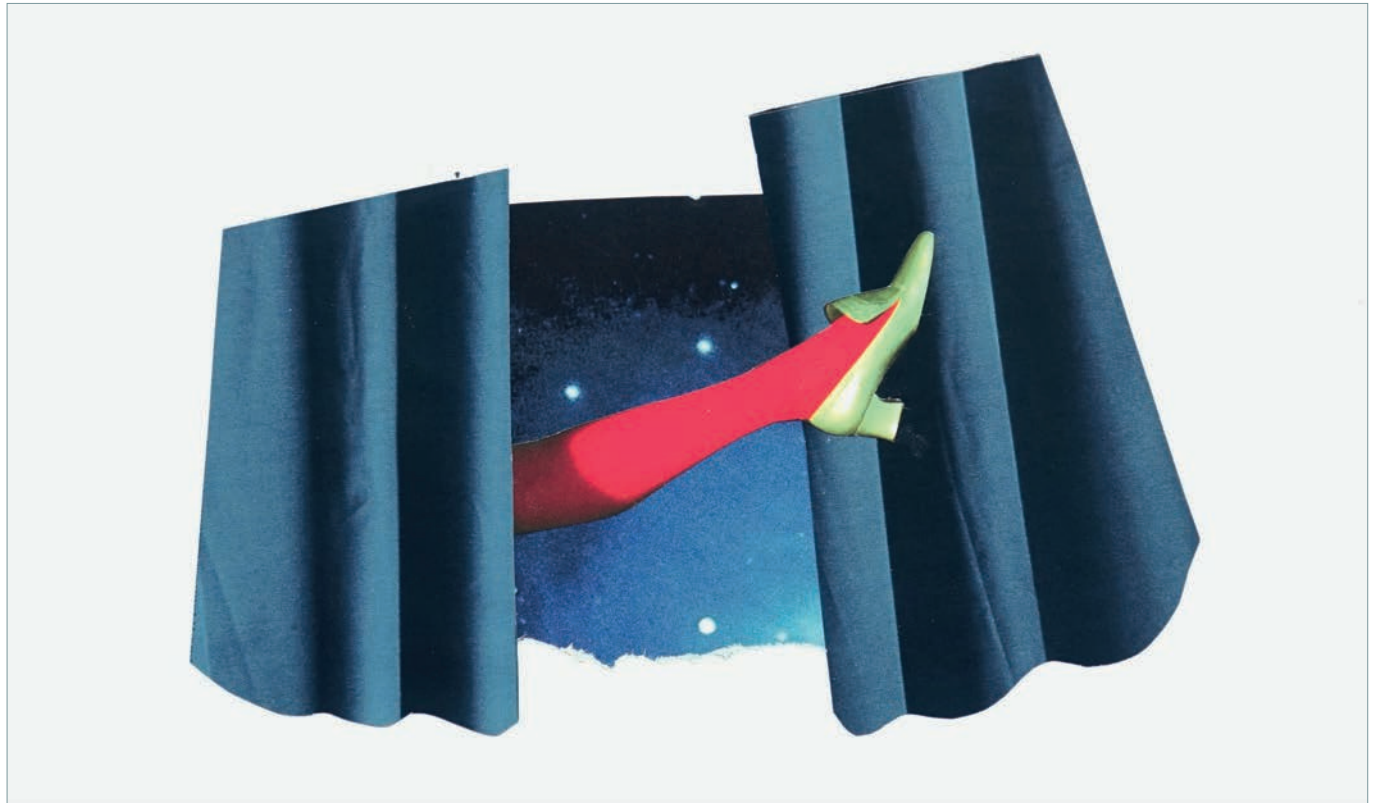
*ill. 6*
*Collage by Ceylan Besevli.*
*Task: Make a beautiful greetings card. Pay attention to colour,*
*form and composition. We do this task as a 'warming up' at the*
*start of our workshops.*
*What Ceylan produced here is a nice 'context collage',*
*expressing the excitement of stepping into something new.*

professional.  For a (product) designer a collage will seldom
be the final result but a tool to explain, a study in colour and
form or part of a presentation. Still it is of great importance
for designers to strive for a high level of aesthetic quality
in their collages. They are hired, after all to create a new
product on behalf of their client; a  product that is not only
well constructed and feasible but that also convinces from
an aesthetic point of view. By delivering professional design
work, to which the collage should contribute, the client should
be convinced of the professional qualities of a designer.

## COLLAGE IN ARCHITECTURE

In architecture too, collage has long been accepted in the design process. And just as it is for the (product-) designer, collage for the architect is a tool and not a goal. We can find great examples of it in the work of Le Corbusier, Bernhard Hoesli, Richard Meier, and Luis Barragán. Due to the structuring nature of the architect's work, collage is – particularly in the pre-study phase – a very effective tool. In the work on specific assignments as well as in the search for new possibilities and explanation of new ideas about our built environment, the medium of collage has been frequently used. We find famous and inspiring examples of this in the work of groups like Superstudio and Archizoom whom we may include in the movement of 'Italian Radicals'. Their utopian collages and viewing boxes offer an image in which culture and nature are radically merged.

The value of this material is reflected in the fact that maquettes and collages are frequently found in museum collections as important documents of the ideas and the work of architects. An important difference between the work of the product designer and the architect is the serial character of industrial products and the 'scale' by which representations are not functional. Mostly we can look at 'the real thing' or a prototype. Underlying material such as sketches, prototypes and collages are especially interesting for the story behind the actual design.

*ill. 8*
*Collage "Playa" by Superstudio.*
*This architecture firm was known for its conceptual*
*architecture works. Their anti-architectural proposals used grid*
*systems as a way to mediate space. Many of their projects*
*were originally published in the magazine 'Casabella', and*
*ranged from fiction to storyboard illustration, and photo*
*montage (Wikipedia).*

*ill. 9*
*Context collage by Eden Symhony*
*Task: Imagine a context entitled*
*'creative workspace'.*
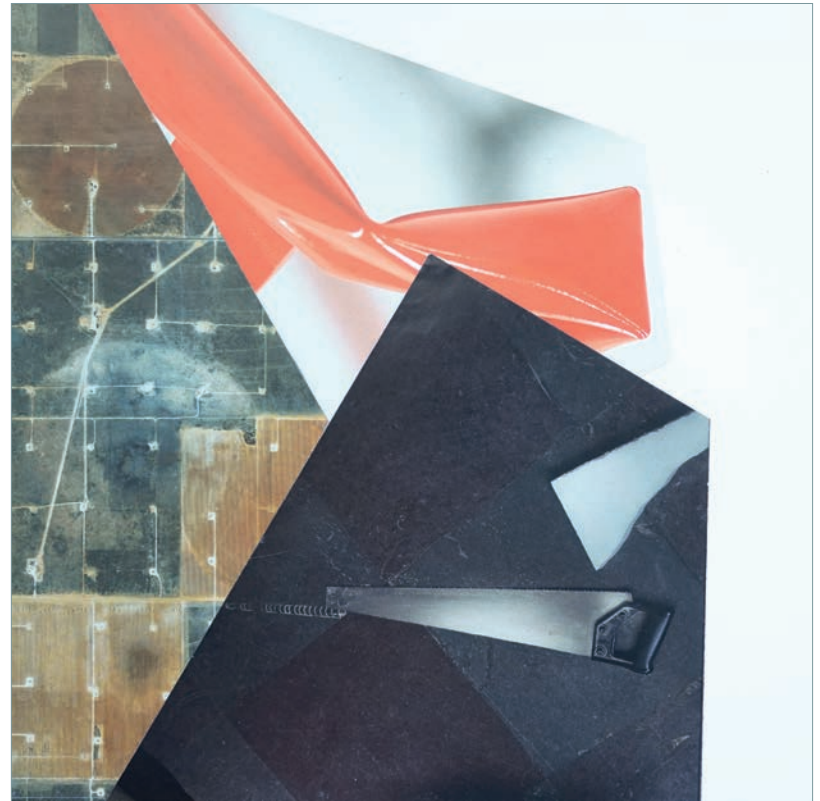
*ill. 10*
*Context collage by Andreas D'Hollandere.*
*Task: Imagine a context entitled 'urban*
*nature'.*
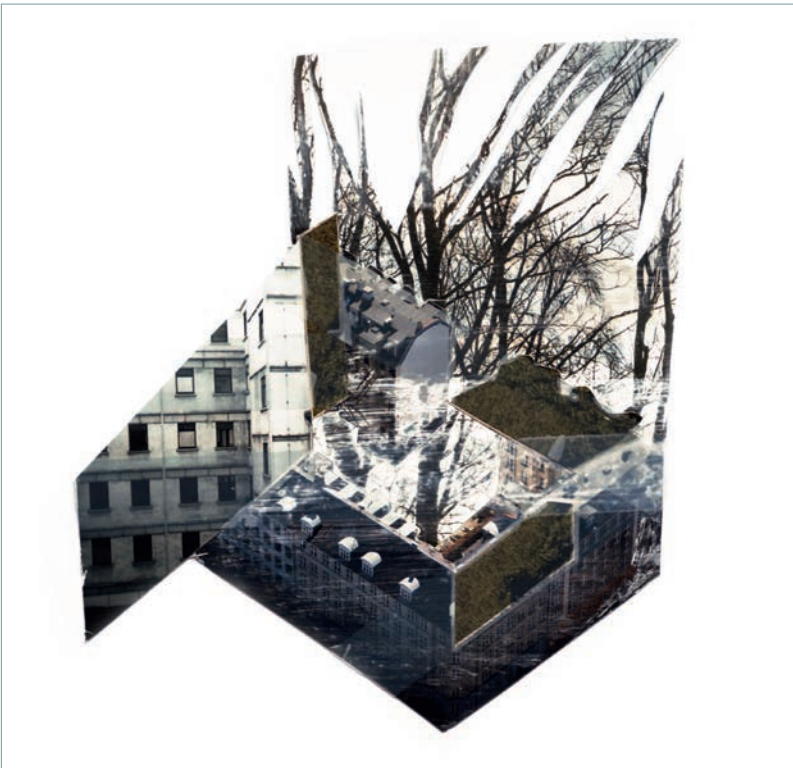


## WHEN TO MAKE A COLLAGE?

At different moments in the design process the need for images comes across.

In the problem analyses phase it is very useful to agree about the context in which the new product will be used, how this context looks and feels and how the products look that have to be considered precursors or competitors. In what aspects does the new product have to equal or differ from these products? Here we talk about a context collage.

In the ideation phase a collage can be helpful to think 'out of the box' and explore all kinds of possible solutions in a broad

*ill. 11*
*Product collage by Aylin Karadeniz*
*Task: Teapot proposal as part of a greater study.*

and global way. These ideas can concern actual forms and colours for a new design as well as changes in the product's context.

In the concept phase, in which more and more becomes clear about the technical ins and outs of the design, a collage can provide insight into the possibilities and restrictions for the looks of the final product. Such a collage deals with structure, main form and details.

Future use as well as interaction between user and product partly determine the appearance of the design. In this manual, we call this a product collage.

ill. 12/13
Collage by Sally Augustijn.
Tasks: Make an (abstract) collage describing
the form qualities of a given product.
Make a product collage as a study for a teapot
that makes use of these same form qualities.
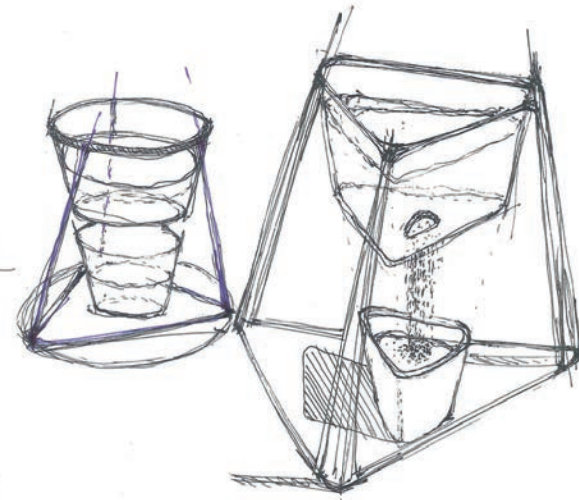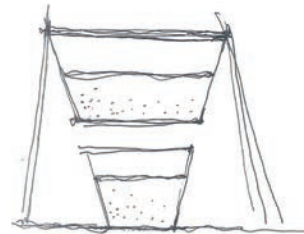
ill. 14/15/16/17
Collages and sketches
by Livio Spada.
Tasks: Make an (abstract)
collage describing the form
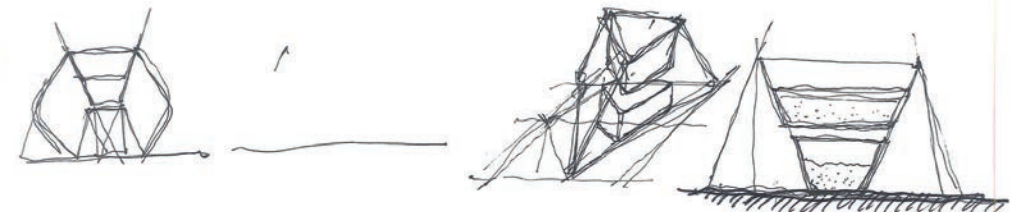qualities of a given product
(left, top and middle).
Make a product collage as
a study for an innovative
teapot that makes use of
the same form qualities
(left, bottom).
Come up with ideas
(in sketch) for such a
teapot (right).

STRUCTURE

+

TEA-POT

+

TEA-CUP

LIVIO SPADA — 10

*ill. 18*
*'Mood board', found on the Internet. Lively image, yes but full of 'contradicting' information therefore not suitable as information about the design process. It does not show clear proposals nor an unambiguous context.*

## THE PURPOSE OF COLLAGE

As we've seen, in a context collage we explore and communicate in regard to the visual environment of the product. Although there may be a lot that is still vague in the early stage of a design process, it is important to make clear and explicit choices. The main pitfall in these kinds of collages is that there are too many elements introduced. This can easily provide contradictory information for the viewer. Because masses of images are easily available, there is always the temptation to show all kinds of possibilities but this is at the cost of recognizability and leads to the choices that need to be made in the design process being postponed.

Also, the argument that the client (or another stakeholder) should have 'something to choose from' should be put into perspective. Making wel-considered choices is, after all, one of the main tasks of a designer.

On the level of appearance, a collage expresses visual qualities that are desired, required or possible in the product. Even before working principles, measurements etc. are being set you could, as a designer, anticipate and propose characteristics of the product's form and emotions that should be aroused in the user. Such a collage, certainly when it concerns a physical product, should show a 'stand-alone' and abstract image, eventually with an object added as a reference.

In this image, all kinds of visual aspects can be suggested, such as colour, lineage, texture, fragmentation, form principles, operation etc.

The 'reference' could be some familiar object from the product's context like a pencil, a matchbox or a coffee cup; e.g. the human hand can be very suggestive as a reference of measure.

Aspects of product use may also be the subject of a collage.
Imagine, for example, the suggestion, given above right, to
incorporate a hand in the collage as a reference. This hand
could at the same time depict a situation of use. Having said
that, it should be stated that for the exploration of product
interactions, the collage tool has limitations. The dynamic
aspects of use, the factors of time and movement are
hard to capture in a static, 2D image. Media like video and
role-playing seem to be more appropriate for this purpose.
Therefore, in this manual the possibilities of a collage for
product use will from this point onwards be left out.

*ill. 23*
*The task was to select three characteristics that your ideal chair design should have and bring them together in a collage as part of a design brief. The terms chosen where 'lazy, natural, warm'. A sleepy person, a cat, elements of green nature and a bed may convey these words literally, but put together they do not suggest an integrated form solution.*





*ill. 24*
*The task was to make a collage that expresses the term 'cute' as a form character.*
*The collage contains symbolic images. In the explanation of his work, the student states that French for him is the cutest language he knows.*

## BEWARE OF PITFALLS

In this manual, we try to help you make better choices and thus, train your collage skills. Skills that will help you through your professional career. In this chapter, however, we point out a few pitfalls, choices that you should try to avoid.

**The collage is too literal**

Novice designers tend to be very literal in how they use images when creating their collages. Rather than using the process of making a collage to explore, study and discover authentic representations of ideas and concepts, they rely on their preconceived ideas, focusing their search on finding visual representations of these ideas. For example, when exploring the concept of 'elegance' they may use Google to collect cultural stereotypes (e.g., flowers, ballerinas, flamingos, etc.). It is clear that this does not help in finding your own, effective form strategy.

**The collage includes symbolic images**

Collages that are intended to study and explore form should focus on textures, shapes, colours, patterns, etcetera. However, students often use iconic or symbolic images to convey meaning. For example, when making a collage that explores the expression of 'strength', they may include the image of a roaring lion, or a bench-pressing muscular man, a diamond, and a super-car engine. While each of these images tells a story, they do not necessarily represent the intended form qualities.

*Task: Make a collage that expresses feelings and emotions that come with the interaction of a given product (in this case: a fire hose). The different elements are all flowing apart from each other without a clue. Furthermore, the rest space (between the elements) does not form an expressive unity.*



*ill. 26*
*The task was to make a study for a machine that is supposed to fertilize and water plants. We see diverse and contradictive images that do not help or inspire.*



*ill. 27*
*The task was to make a collage that explores the character 'protective'.*
*The complexity of this collage lies in the story that is told. To emphasize 'protection' a huge threat is introduced that tends to dominate the entire composition.*



## The collage lacks aesthetic qualities

On the one hand, one can argue that the overall aesthetic qualities of a collage are not important when used as a design tool. Our experience, however, suggests otherwise. As in any design expression and aesthetics are crucial. Moreover, collages are often used as a means for communication (see above), and engaging and convincing clients and other stakeholders requires a professional-looking production: the collage needs to look good.

## The collage is a collection

Inexperienced collage makers often use simple and linear layouts, simply placing components next to each other without creating new meaning by combining components. An effective collage is one in which existing components are used to create a new composition, in which the composition creates new meaning.
Hence, more than a collection of found images, a collage is an original image that is composed of the ingredients of found images.

## The collage is too complex

Novice designers tend to include too many elements in their collage. While they may believe that this adds meaning and detail, the opposite is often true. Using fewer components forces the designer to focus and to take a stance.

*Matrix, showing the link between levels, criteria domains and issues to address in your collages. Page numbers are added to refer to places for further reading.*

The matrix contains:

**Criteria, required in each collage:** Aesthetics, Meaning, Effectiveness

**Levels of inspiration:** Context collage (some say mood boards), Product collage

| | Aesthetics | Meaning | Effectiveness |
|---|---|---|---|
| **Context collage** (some say mood boards) | Atmosphere Composition and balance (p29) | Persona (p32) Target group Surroundings | Foreground/ background Preferences Reasoning (p35) |
| **Product collage** | Stand alone (p28) Proportions Contrast (p30/31) | Abstract (p31) Archetype (p21/32) Scale (p17/24) | Visual qualities (p33) Use cues, details Form strategy (p33/34) |

**Issues for collage** (and where to find about them)

## AN OVERVIEW

We have seen that there are different levels on which a collage can serve the design process. The choice between these levels depends on [or 'is dependent on'] the purpose of your collage and the phase of the actual process, and we have seen that there are three main criteria for each design collage. To bring all these related concepts into one picture, we have made the above overview.

Here, you can see that the 'issues for collage' that could be met in your work depend on the chosen level and on the actual criterion that you're working on. Please, don't use these issues as a checklist; they are merely meant to give a hint of what to look for. Some of these issues will be discussed individually later in this manual.

*ill. 29*
*Collage by Michael Speek.*
*Task: Make a beautiful greetings card for a*
*specific occasion. This card is intended to*
*congratulate the arrival of a new born baby.*



*ill. 30*
*Collage by Xi Xu*
*Task: Make a beautiful*
*greetings card for a specific*
*occasion. This card is*
*intended to congratulate the*
*recipient on a new house.*

*ill. 31/32/33*
*Use of a masking tool (left). An essential tool for finding the
right image parts. These hooks of thick paper – white or black
– are frequently used by photographers too. In the middle,
you see the cut-out part, to be used in a collage. On the right,
this fragment is used as part of a product collage. Of course,
by doing this a lot, your eyes will be trained to find useful
parts quickly, but you'll also find out why a 'masking tool' is
indispensable.*

## Basic techniques

Many skills needed for design, are impossible to learn without
'doing them'. Collage is typically one of those.
In the preface, we have already stated that materials,
tools and basic skills are considered to be available to and
under the control of everybody who wants to be a designer.
Learning by doing means that the more you do, the more you
learn. Just for practice, incorporate collage in your daily life
and communicate where possible through images. Instead
of congratulating your friends on anything or just buying
a greetings card, make them a meaningful image. It will
be appreciated and you will soon develop a routine and a
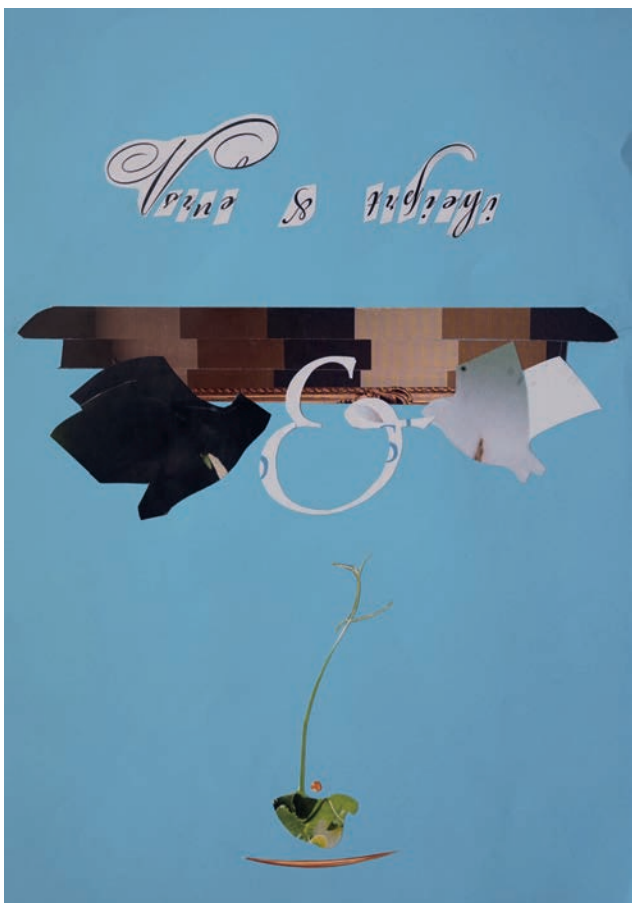personal style of working.

LEARN IT BY DOING
One thing's for sure: you will not master collage skills by only
reading this manual.
Let's go through the typical process step by step and look
at the right working order and the aspects that need further
explanation.

**Select**
Once you have set the purpose of your collage and decided
which message is to be conveyed, you will look for useful
images and image parts. Any richly illustrated magazine will
do and it doesn't even have to be of latest style and fashion.
Spontaneous and intuitive choice is the best way to start.

Photographs, advertisements etc. all have their own
meanings, meanings that basically have nothing to do with
the meaning that you want to get across in your collage.
Therefore, it is highly recommended to use a searching mask
of two L-shaped pieces of paper. By moving these L shapes
over a page, you isolate the part of the image that you need
from the rest of the page. This will help to determine the
size and the global shape of the fragment to be cut out.
Realize that form, colour and texture are more important than
size. Typically, you will find more possibilities than you will
ultimately need. Regard them all as collage ideas and decide
about which ones to use and which ones to discard later on.

ill. 35
Collage by RW.
Editing your image parts:
lines can differ from tearing
or cutting. Of course, they
will have to harmonize with
'internal lines', present in the
image fragments.

*ill. 34*
*Collage by Michael Speek.*
*Task: A form study by collage*
*for the design of a trophy*
*(the Young Scientist Award).*
*Very precisely selected*
*image parts, securely*
*positioned and mounted on*
*a background of coloured*
*paper.*

**Edit**

It matters, of course, whether the image fragments are taken out by tearing or by cutting with a knife or scissors. Thus, created linings will determine the end result, in the same way you edit the fragment before montage: you can fold it, crush it, cut it into little pieces etc. according to your goal, your imagination and creativity.

A popular technique in collage making is the so-called called 'glazing' – creating a haze or blur with thin, translucent white paint. You can do that either on an individual image fragment or on (parts of) the collage as a whole.

**Montage**

The best strategy for choosing a format for your collage is to do so after you have decided about the content and the global composition. In practice, this means that sometimes your collage can be rather small. Due to the fact that your collage will probably be scanned and used as part of a digital presentation, this is of no importance.

Tiny collages, blown up and projected can become very monumental statements.

In the choice of background, white paper may be the standard; some colours work better on a dark or even a black black background; sometimes coloured paper may be the better choice. You should always have enough material around to experiment with. In some cases, a photograph will work well as a background. It can add to the atmosphere or provide a reference for use or context.

Before the final mounting, lay out your collage. Puzzle the parts together very carefully and have a last critical look. Then mark the position of the several parts with little dots on the background sheet to be sure to glue them exactly in the right place.

*ill. 36/37/38*
*Collage by RW.*
*Another example of the*
*(simple) use of Photoshop*
*that at the same time reveals*
*the importance of scale once*
*again.*



## DIGITAL TOOLS

Certainly, there is a lot of material to be found on the Internet and it's very tempting to start looking for images there. Nevertheless, the 'crafty' way of working should be your preference at the start of any collage. Why?
In order to find images via Google and so on, you have to start with a verbal search. In this manual, we want to discuss communication through images. The direct way of browsing through a magazine, seeing, recognizing and using images and image fragments not only delivers the best collage ideas, it also helps to 'sharpen' your eye and train your visual sensitivity.

Apart from that, your computer – of course – is a wonderful tool for the layout and editing of collages. In Photoshop, for example, digitized material can easily be reproduced, transformed, recoloured, flipped around and processed in layers. Except for showing a few examples, this manual contains no further instructions on this subject. Those who want to dive into this *mer a boire* will find loads of information and ideas about it on the Internet.
(e.g. check this link: http://chaoticresources.tumblr.com).
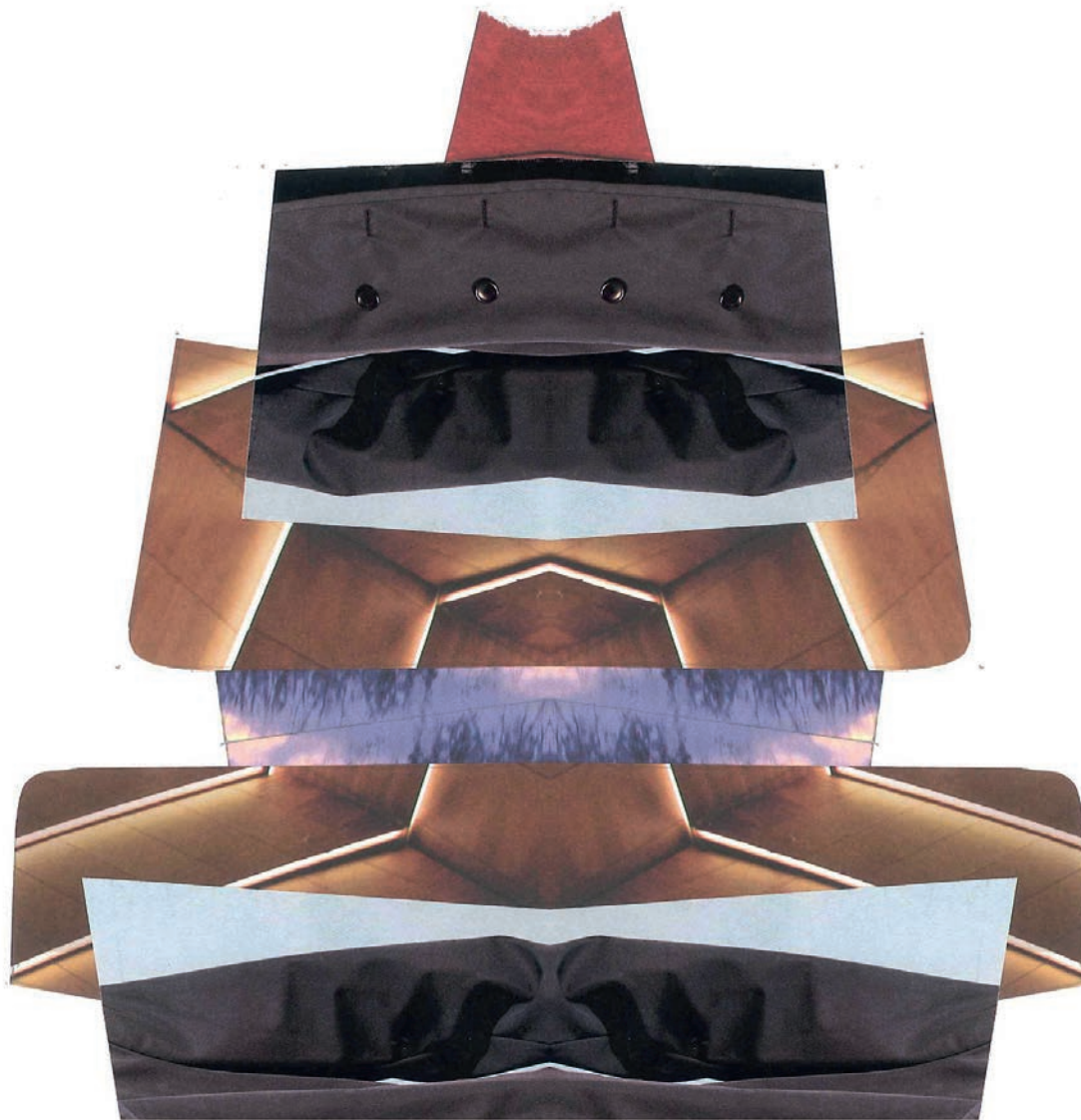
*ill. 39*
*Collage by RW.*
*Example of 'mixed techniques'. What started in*
*the traditional way was finalized on the computer.*
*Photoshop enables you to select, copy, flip, work in*
*layers and invisibly 'glue' your image,  to mention*
*just  a few out of hundreds of possible editing tools.*
*To all creative minds: 'Let your hair down!'*

*ill. 40*
*Photoshop collage by Filip Dujardin*
*(photographer). All photographed, architectural*
*details, minutely merged into a perfect illusion.*



*ill. 41*
*Town hall of Zaandam by Sjoerd Soeters*
*(Van Eldonk architecten). The architectural play*
*is conceived here very much like a collage.*
*New technologies are stretching the limits*
*of disciplines up to the boundaries of our*
*imagination.*

## A DIFFERENT VIEW

A photographer perceives reality and chooses a part of it to capture by means of the camera. The result is not necessarily a concrete and recognizable image. Some photographs show a high level of abstraction and can be ambiguous in their meaning. In every photograph, however, we find parts that, isolated from the context of the whole, offer an abstract image or a meaning of their own. It is right there that we can see, the attractiveness of collage: by the omnipresence of photographical material in our culture (printed or not) we also find ourselves surrounded by an abundance of image fragments that we can bring together and arrange in different ways, thus creating new assemblies. And not only photo material is widely available but also good-quality cameras are in everybody's pockets today. If you can take parts out of a photograph, you can also find parts in the real world that you can capture and use – as image fragments – for your own work: a study in form possibilities, an explanation of a fantasy or an inspiring design proposal. Of course, the ease in which material is available nowadays is inversely proportional to the task of making selections within this wealth of possibilities. To help you with that is one of the goals of this manual. It is important to develop an 'eye' for useful image fragments.

Therefore we have already advised you to use the 'masking method'. In photographing your own basic material, you could make use of a macro-lens if your camera is not able to focus at a close distance.
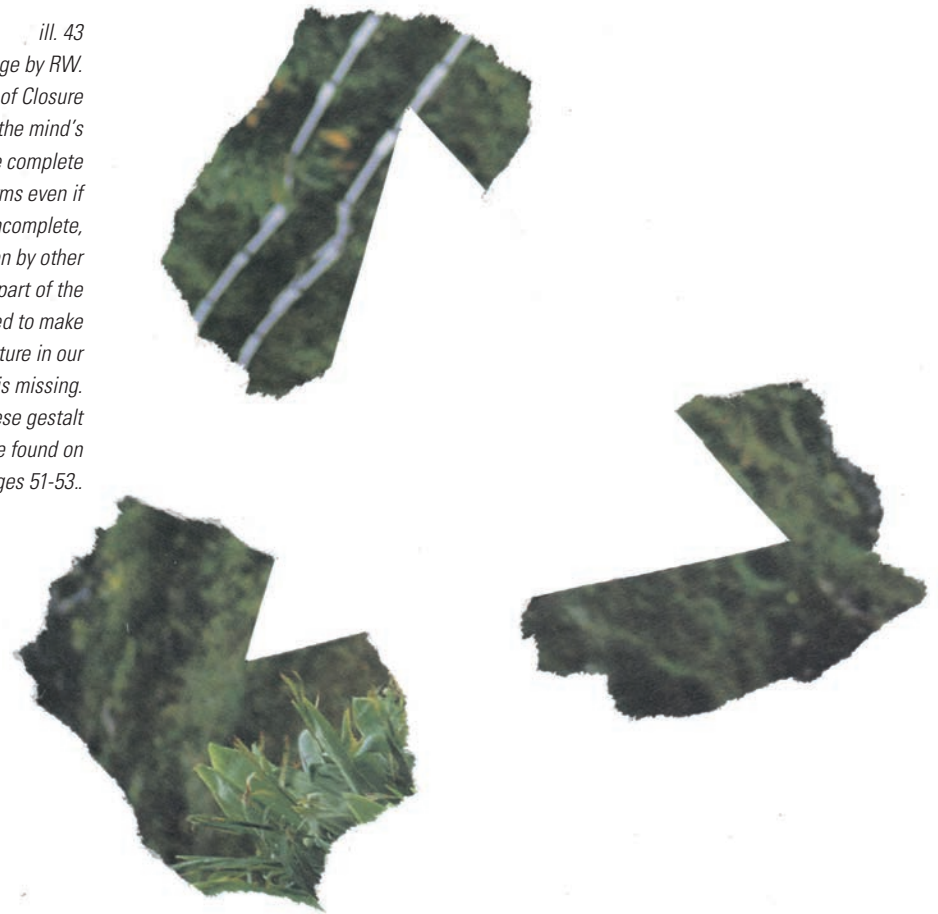
*ill. 42*
*Photograph from Daylight &*
*Architecture magazine.*
*Photos may not be taken*
*for their fascinating*
*subject. This one is almost*
*completely abstract and its*
*value must be seen in for*
*example, its composition.*
*So, its substantial meaning*
*is a matter of free*
*interpretation.*

## Issues in collage

No matter for what purpose it is made, each design collage should meet the three main criteria stipulated previously— i.e. they should be attractive, meaningful and effective. In this chapter, we explore these criteria again and elaborate on some of the issues, typical to each of the 'domains'. These 'rules of thumb' are not meant and are not suitable for following directly but can be helpful to start your own, personal thinking.

ATTRACTIVE
In chapter 2 has already been stated that a design collage, being only a tool in the design process, should be aesthetically convincing. Besides sketches and verbal descriptions, it is one of the representations of the 'product to be'. In that sense, it should communicate the intended appearance of that product in a precise way.

### Composition and proportions
By presenting a collage, you are showing your design considerations, of course, but at the same time you are giving your client a 'look into your kitchen', so you better take care the kitchen is 'clean and well organized'.
In design, we know about the 'gestalt design principles'. These same principles – proximity, similarity, closure, continuation, common fate and good form – are certainly applicable in composing a collage. In fact, collage is a good medium to explore the possibilities of these principles and to understand them better.
As far as the overall composition is concerned, one could say that it should serve the aesthetics as well as the purpose of the design, just like the choice of orientation (landscape,

*ill. 44/45/46/47*
*For a better understanding of the 'rule of thirds', we give you an example: this image, part of a NASA publication is meant to illustrate some statement about the functioning of black holes.*

*Left: The writer has chosen to show all of the spectacular surroundings of the black hole. The natural focus of this picture, however is the point where you see a so-called jet escaping from the black hole.*
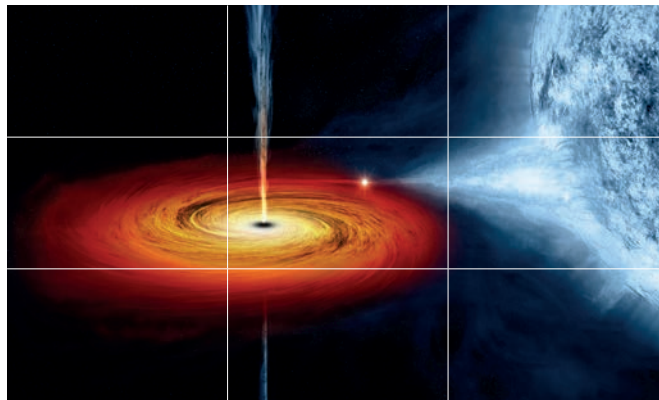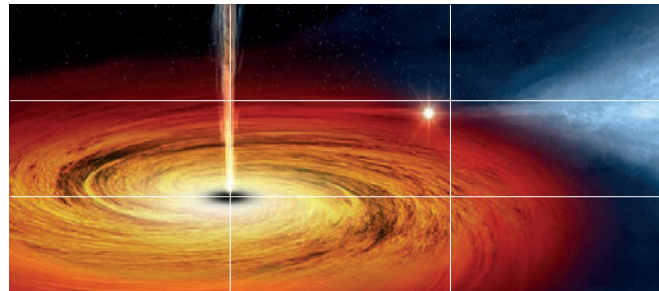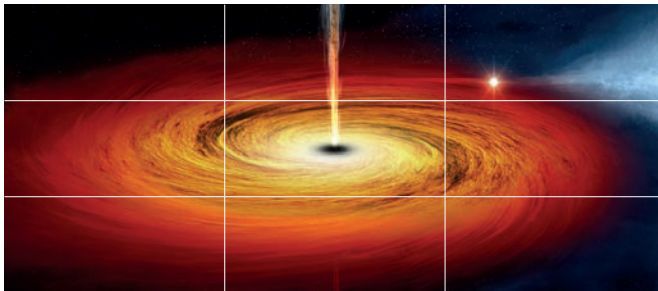




*Right: Applying the rule of thirds to this picture, putting this focus point right on the crossing of 'hairs', we see a visually more interesting and balanced image.*

*The fact that a little piece of the orange disk was cropped is not disturbing. In our minds, we tend to complete these kinds of basic forms.*
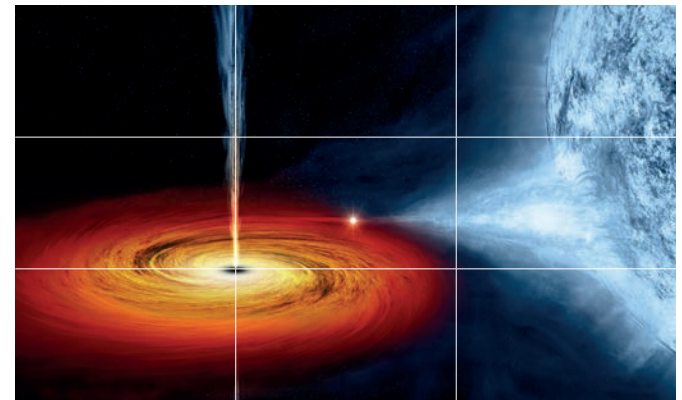
*Say, we're looking for a 'hot spot' to use in our collage and we've chosen to use*

*this image, we might tend to make a cut-out with this spot right in the middle (left).*





*Applying the rule of thirds to this selection delivers, however, a far more dynamic and balanced image. Even here, the oval form is strong enough to be completed in our minds (right).*

portrait or square). In the literature, you can find numerous measuring systems, mostly developed and used by architects. They are all taken from 'the golden ratio', an ancient, mathematical ratio number.

Some photo management applications (like Apple Photos) have the rule of thirds integrated in their image cropping tool. Just give it a try, it's simple, but it works!

**Rule of thirds**
Because in this manual, we want to develop collage as a quick and practical communication tool, we recommend the use of the so-called 'rule of thirds'. This is based on the fact that our eye is always looking for a given order. It's a simple rule, which is also frequently used by photographers.

ill. 48
Found on the Internet.
Colour space. Looking for
colour contrasts, it's good to
keep the three dimensions of
colour as a model in mind.
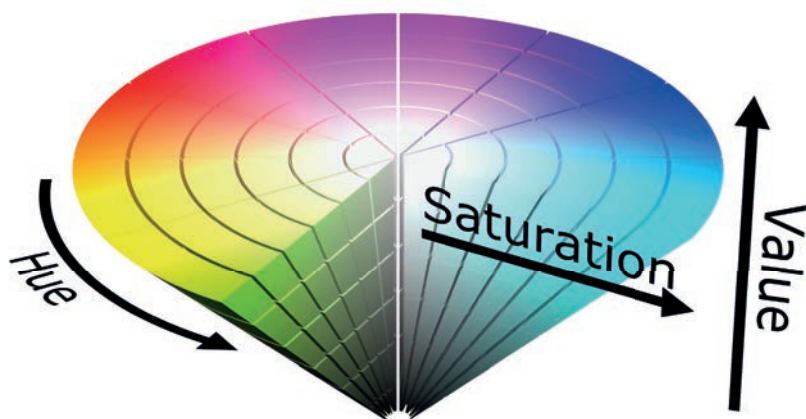


ill. 49
Collage from MSD course.
Task: Give a visual
expression of 'naïve'.
This participant chose a
typical colour contrast
approach. The primary and
complementary colours refer
very strongly to a 'children's
world', which is underlined
by the primitively formed
image parts.

## Contrasts

Every sensory observation is based upon contrast. We can define contrast therefore as the presence of noticeable differences. Because the colour of letters is different from the paper, we can read them. Because of a small dent, we can feel the position of the home button on our smartphone. By differences in the repeating structure of sound we can distinguish music from street noise. In collages, we make use of visual contrasts which we can divide into two main groups: colour and form. Let's have a look:
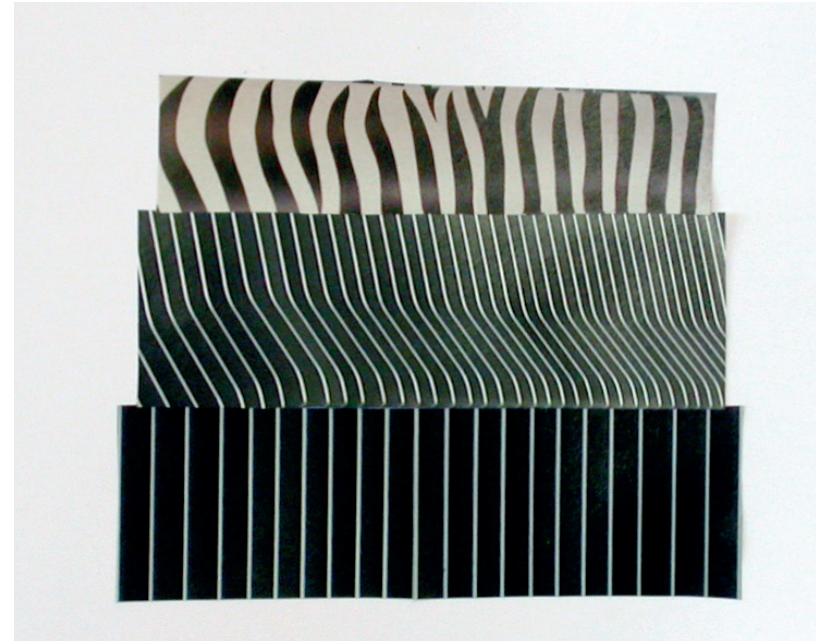
### Colour contrast

Colour is present in light and becomes visible when light strikes a certain surface. The specific property of any surface makes us 'perceive colour'. In this manual, we will not discuss the physiology of colours, we will simply appoint the different colours and describe their mutual consistency. The names of colours are amongst the first words that we learn as children. With these first words, we are talking about 'hue' (red, orange, yellow, green, blue and purple), which is one of the three dimensions of colour. Besides hue, we distinguish brightness and saturation. Brightness (or value) stands for the amount of reflected light from this colour; in other words, the value of grey that this colour would have on a black and white picture. Saturation stands for the amount of hue (or chroma), perceivable in a colour. According to this layout (the 'colour space') the question of whether black, grey and white are colours or not can be answered. We call them 'non-chromatic colours'.

Looking for colour contrast, it is good to realize that these three dimensions are at your disposal and to be aware of the place that each colour has in the colour space. Two colourful fragments in a collage can simultaneously show great contrast in one dimension, little contrast in the second and no contrast at all in the third dimension.

*ill. 51*
*Collage from MSD course.*
*Task: Give a visual expression of 'wise'.*
*This participant gives several contrasting textures,*
*which show simultaneously all the same black-*
*white contrast. This, together with the very simple*
*and static composition refers to 'controlled', which*
*may be related to the quality 'wise'.*



*ill. 50*
*Collage from MSD course.*
*Task: Give a visual*
*expression of 'reckless'.*
*This participant chooses to*
*use a form contrast in which*
*he even interferes with the*
*background layer.*

### Form contrast

In therms of form, we can work with lines and planes. Because in collage we work mainly with planes and do only little drawing, lines will mostly be formed by the boundaries of our planes. So, the way a fragment is cut or torn out, and whether this is done 'free hand' or with a certain 'guidance', will be decisive for the quality of your lines. So while plane and line may be used separately, it's always good to realize that in a collage, they are indivisible.

### Texture contrast

Because we work a great deal with photographed image elements, texture is an important issue. We can define it as the visual state of a surface. All planes are plain coloured or textured. And textures, of course, can contain internal lines. Our collage material has its own texture, or we can add new texture by editing.

### Contrast of meaning

Besides the above mentioned, objective contrast tools, we can also make use of contrast of meaning. Especially in the context collage, meaningful elements can be very effective. Meanings that we grant to an image are, of course, subjective. Sometimes they will be determined personally but mostly these meanings are determined culturally. In design, we tend to work for (a group of) users that share the same cultural background. Therefore contrasts in these cultural meanings are interesting to focus on in your context collage. The tools that are hereby at our disposal are metaphors, analogies and archetypes. We have already stated before that in the actual design of products one should be very careful in the use of metaphors and symbols. Therefore, also in a product collage too, in which we explore possibilities for the appearance of a new product, we should hold back on such symbolic references.

*ill. 52*
*Light fixture 'Mayday' by*
*Konstantin Grcic.*
*Archetype was used here in*
*various components. Merged*
*together, a new meaning is*
*created.*



*ill. 53*
*Juicy Salif by Philip Starck.*
*A completely new form from*
*which one can clearly read*
*the use cues.*



*ill. 54*
*Bike helmet by Bell.*
*Although the purpose of*
*a bike helmet actually is*
*'safety', the archetype is very*
*much originated from the*
*expression of speed. Why?*
*In bicycle racing, winning is*
*based upon speed!*

## MEANINGFUL

Above we discussed the use of meaningful elements in our collage. We should consider that a design collage as a whole should convey the intended meaning.

The word 'design' may be easily misunderstood in the world of product development. It can be understood in a 'small' sense, as an additional activity to put a fixed, technical solution into an attractive envelope. It can also be understood in a 'large' way as the search for ways to make technological concepts accessible, understandable and manageable to users. Those who prefer to look at design as a broad and multidisciplinary activity will probably identify with this 'large' way of looking and will discover that it is, in fact,

'meaning' that the user reads when looking at a product. Again, the purpose of this manual is not to conduct a broad discussion about design but to be a practical help. Therefore, it is good to be aware of the role that collage could play in the complex process that will lead to a new and successful product.

### The eye of the beholder

A convincing collage should tell the right story. It should present a meaningful image but it should also hold the eye of the beholder. There are several ways to do this.

We have already looked at the 'rule of thirds' (p. 29), which helps you to balance your composition, but it is also useful

to steer the attention of the beholder. Preferred places for that are the crossings of the 3x3 grid lines. Another method is to be clear about the priorities in your collage. For that you should treat your collage as a 'stage'. Onstage there are the stars, of course, but also the secondary cast, the figurants and, not least the scenery and the coulisses. In practical terms, this means that we should be clear about our message. Especially in a context collage it is important to have all image elements play their proper role and to show what should be considered foreground, what is secondary and what is entourage or background. To achieve this, we have all the visual elements at our disposal that we have already discussed in the previous sections. That, of course, means

*Product qualities. This product (left) is supposed to be strong, friendly and fresh, all at the same time. To communicate this in the packaging, the designer uses metaphors: 'a strong man' who, nevertheless looks 'friendly' (rather harmless, one could say). The fresh part is conveyed by the image of three lemons. The form of the bottle itself is completely neutral.*
*The product on the right is doing better. The bottle is telling the 'product's story. It refers directly to the name of the brand ('Triangle') and integrates well with the label design.*



ill. 56
*Form and colour can, in spite of limitations in material and technology, also have their own expression.*



ill. 57
*Collage by Daniella Passa. Task: Make a collage of 3 to 4 elements, expressing two product qualities at the same time. 'Friendly and traditional'. Through such a collage one could start the development of a 'form strategy'.*

that in collage we should think inclusively, just as we should in the design process as a whole. We cannot approach the three criteria for a good design collage separately.

EFFECTIVE
Collage is the ultimate way to quickly explore new ideas, visualize them and bring them into discussion. It enables you to inform your stakeholders, it enables them to think along with you and to contribute to the design process.
In 'The purpose of collage' (p. 16) we already discussed the pitfall of overloading your collage with elements instead of making (or preparing for) choices. As a designer, you should always strive for clear statements. Just like a piece of text,

a collage should inform as clearly as possible. Possible discrepancies with the view of a client or another stakeholder will appear 'on the table' at an early stage. A clear tuning of visions and views regarding visual qualities will surely contribute to an effective design process.
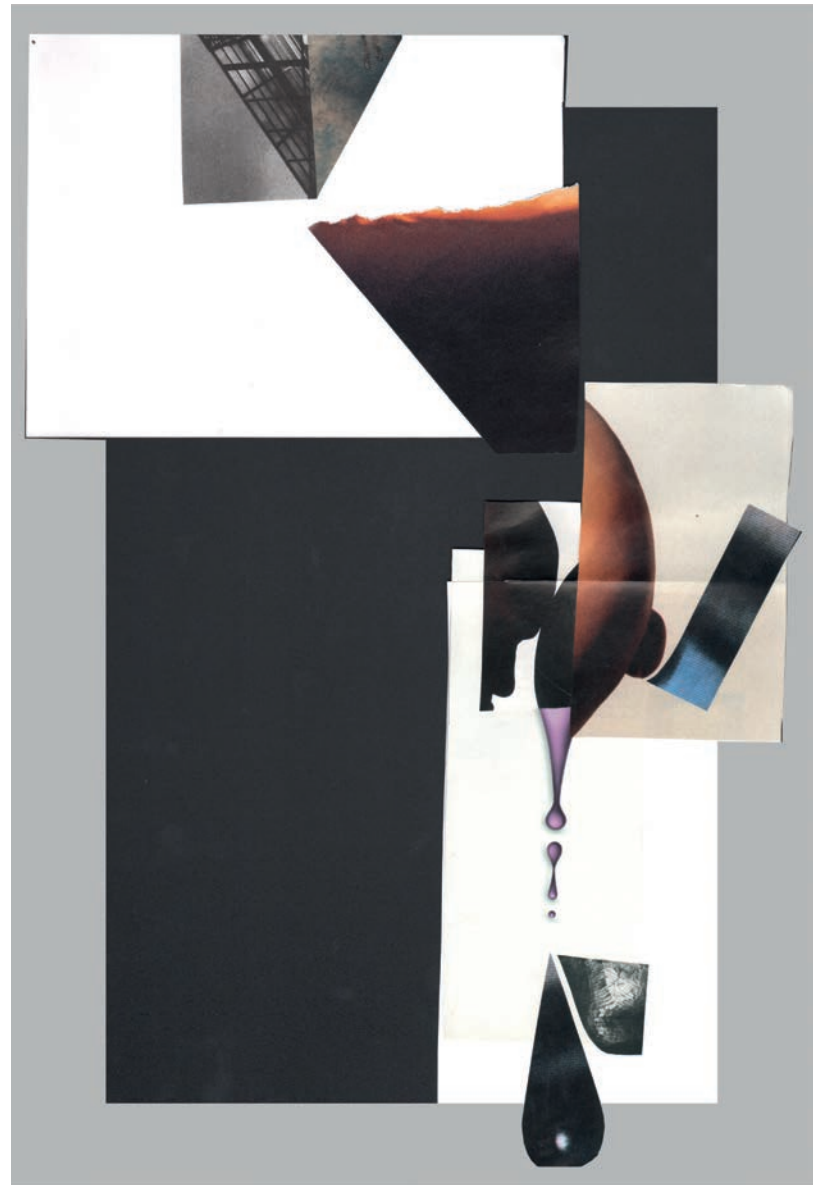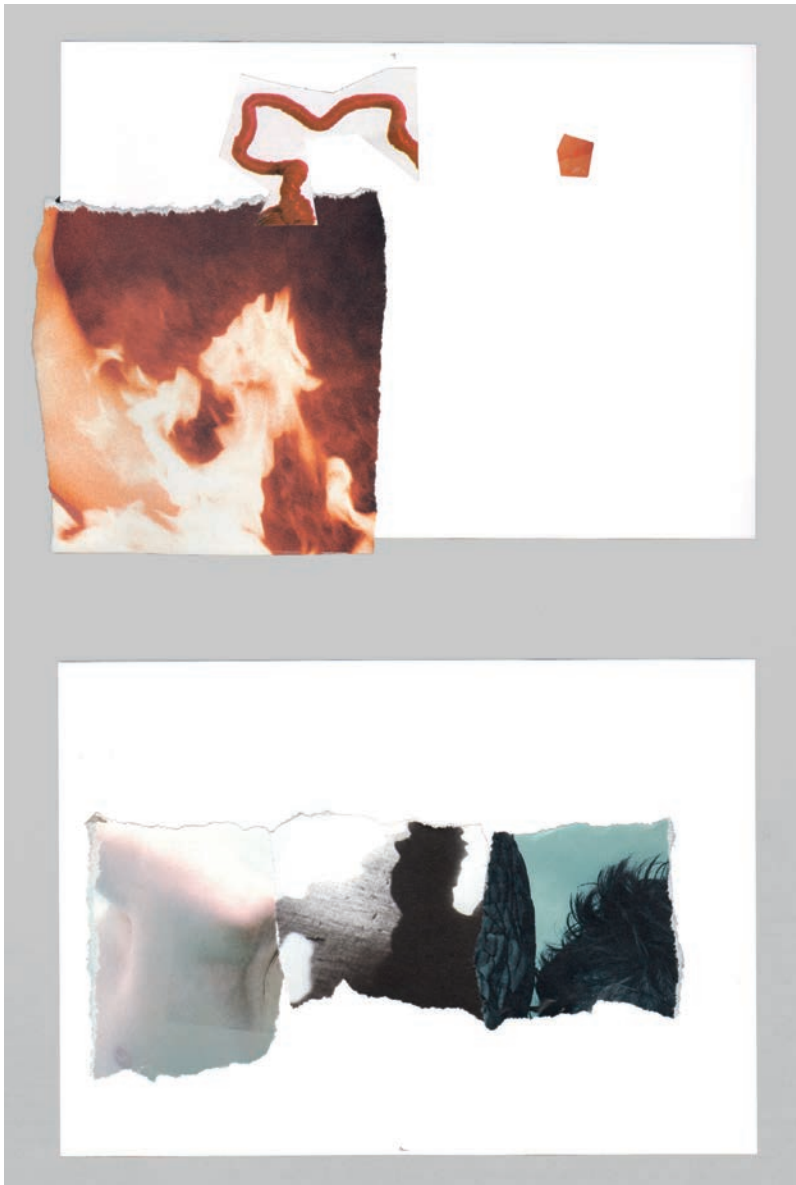
**Form qualities**
How can we recognize 'meaning' in an abstract form? The word character is widely used for persons (personality traits) but it can also be used to describe 'things' (characteristics). In the description of products however, the word 'quality' is a clear and neutral term. Part of a designer's task is often to give the product to be designed certain properties or

qualities. Some of these qualities are of special importance because they should distinguish the product from competitors in the market. These qualities should preferably be perceivable in the design. Space for variants in form, colour and material, available inside the boundaries of a concept should thus be used for the communication of these qualities. The sole appointment of these qualities in an advertisement (e.g. 'our washing powder is powerful against stains and safe for your fine clothes') should be regarded as a bid of weakness; especially when we're talking about contradictory topics (powerful and safe). In such a case, the designer should come up with a strategy to visualize these complementary qualities in one strong and unambiguous form.

*ill. 58/59*
*Series of collages by Rosanne Martens.*
*Task: Combine two qualities into one form. Top left 'courage',*
*bottom left 'humble', and the combination of these two on the*
*right, slightly contradicting qualities.*

*ill. 60/61/62/63*

*The way you select a part of an image can be as important as the image itself. This example may be part of a context collage and illustrates a 'persona'.*

*Above, left is the entire image, as found in a magazine. If you want to focus on the concentrated character, you may use only the 'portrait' (above, middle). If you want to emphasize 'the sportsman', you may include his hands and part of the bicycle (above, right). If you want to show that we're dealing with a thoughtful, maybe even slightly philosophical mind, a part of the horizon will give a meaningful hint (bottom, right).*

*ill. 64/65/66*
*Above: Two collages by Gianni Orsini at Well Design.*
*The left one gives insight into the context in which the design*
*will be used and also shows some example products.*
*On the right, four form concepts are projected onto the collage.*
*Bottom right: Cleaning truck by Well Design for Ravo.*
*The result can be seen in the streets.*



## Design collage in practice

Everyone who uses imagination in their personal or professional life could make use of the medium of collage and designers in particular, who are constantly looking for new ideas, other approaches, different ways to look, could benefit and be inspired by 'random images'. Collecting these images, bringing them together in a new, surprising and meaningful way, to turn from a passive viewer into an active or even proactive one is often just one step away.

Having said that, one could also state that not all (industrial) designers by far, use collages in their daily practice. This manual is not the right place to discuss why they don't. We will focus on a few examples where the medium was put in place as a way of visual communication. And, of course, we'll let the images do the talking.

*ill. 67/68/69*
*Pitch for Raichle (ski boots) by Vision*
*(Tim Selders, Gerben van Oorsouw,*
*Michiel Oudakker en Gianni Orsini)*
*On these presentation sheets you can see*
*the inspiring context collages together with*
*the proposed form concepts. During the*
*presentation of these design ideas, music*
*was used to underline the atmosphere of the*
*different approaches.*

*ill. 70/71*
*Collage use by Muzus.*
*Left, a filled-in circle of values.*
*Below, participant, at work*
*with a 'trigger set'.*
*Both examples of direct*
*and interactive, visual*
*communication.*

Delft-based design office Muzus is active in Healthcare, wellbeing, culture, finance, Midcap and retail.

Lydia The, one of the designers, tells me that they, typically use the collage medium to complete the information they get out of interviews and questionnaires from clients and user(group)s. In their research, trigger sets (an extended set of small images and words) are made available to the participants to provoke and illustrate their story. People use this material to fill in sensitizing workbooks and cultural probes.

Thus, they are able to express themselves without writing the whole story. Often, in an interview or creative session the designers ask participants to make a collage around a given structure, such as a timeline or in a circle of values. These collages are purely meant as conversation pieces, to find out about an underlying story.



EXAMPLE FROM PRACTICE **MUZUS**

*ill. 72/73*
*Two collages by Erik Jepma*
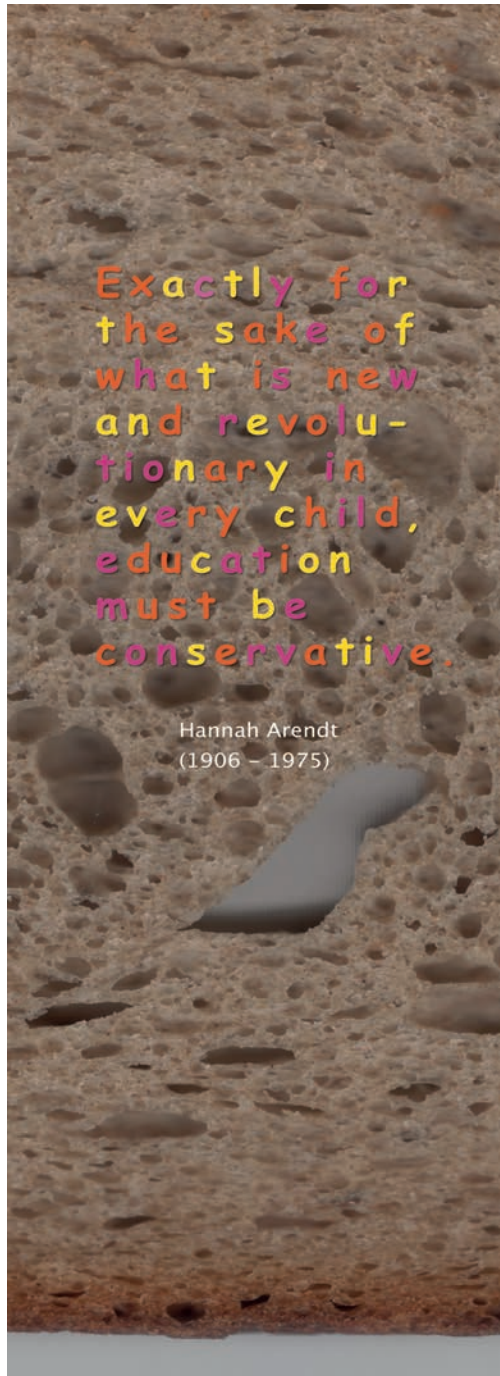*and Rudolf Wormgoor.*
*An example of the collage,*
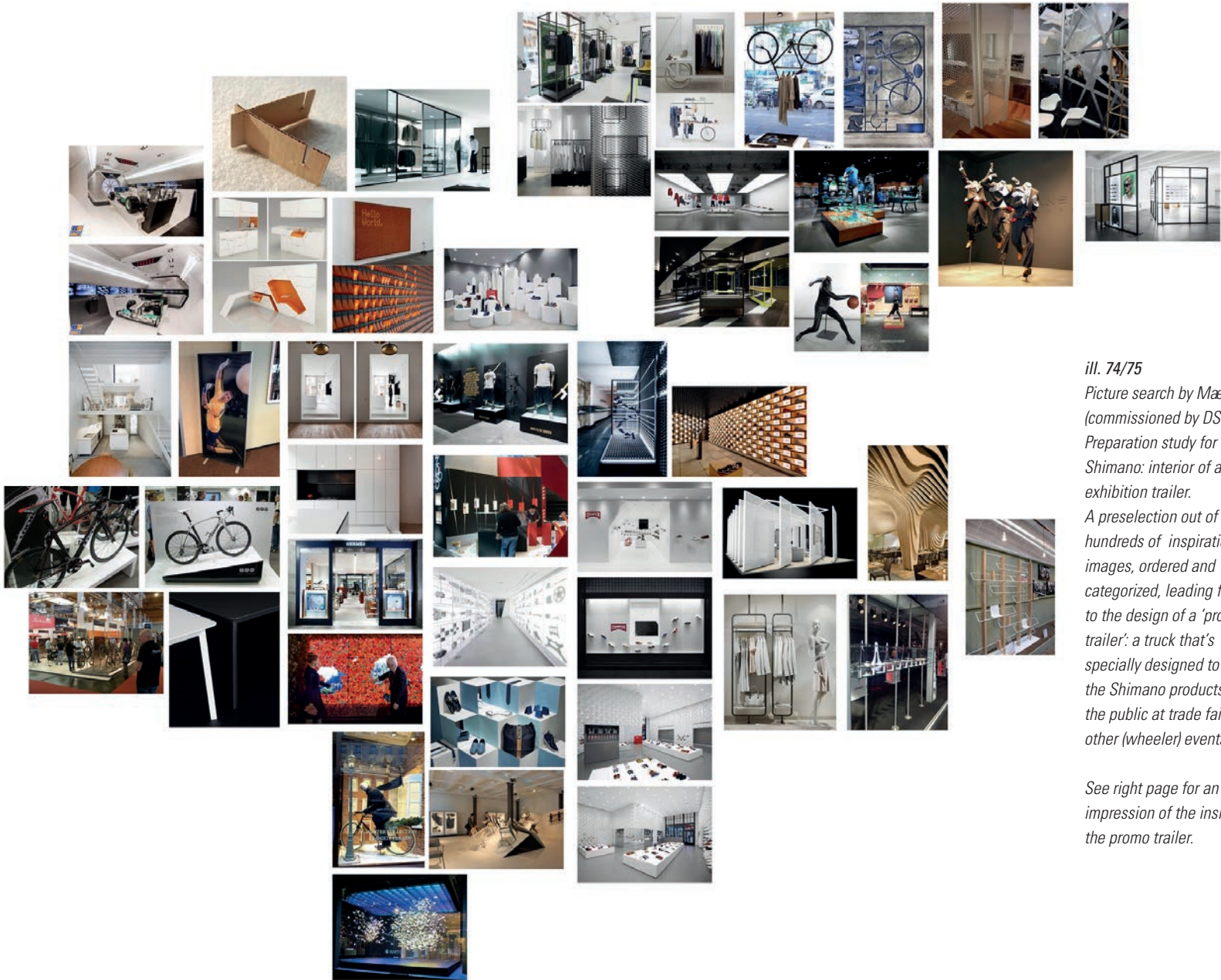*being the actual design.*
*For the Faculty of Education,*
*Hogeschool Utrecht (HU), designers*
*made about 130 door-sized posters*
*(90 x 280 cm) using mixed collage*
*techniques.*

*The aim of the project was to visualize the*
*literature, used inside the Faculty.*
*Meaningful quotes of important authors*
*were merged with associative images.*
*For the poster on the left with a*
*beautiful quote by Hannah Arendt, an*
*actual slice of bread was scanned*
*and printed in large format.*



Exactly for the sake of what is new and revolutionary in every child, education must be conservative.

Hannah Arendt
(1906 – 1975)



You use a glass mirror to see your face; you use works of art to see your soul.

George Bernhard Shaw
(1856 – 1950)

EXAMPLE FROM PRACTICE

*ill. 74/75*
*Picture search by Mærke Vof (commissioned by DST). Preparation study for Shimano: interior of an exhibition trailer.*
*A preselection out of hundreds of inspirational images, ordered and categorized, leading finally to the design of a 'promo trailer': a truck that's specially designed to show the Shimano products to the public at trade fairs and other (wheeler) events.*

*See right page for an artist's impression of the inside of the promo trailer.*

EXAMPLE FROM PRACTICE   mærke
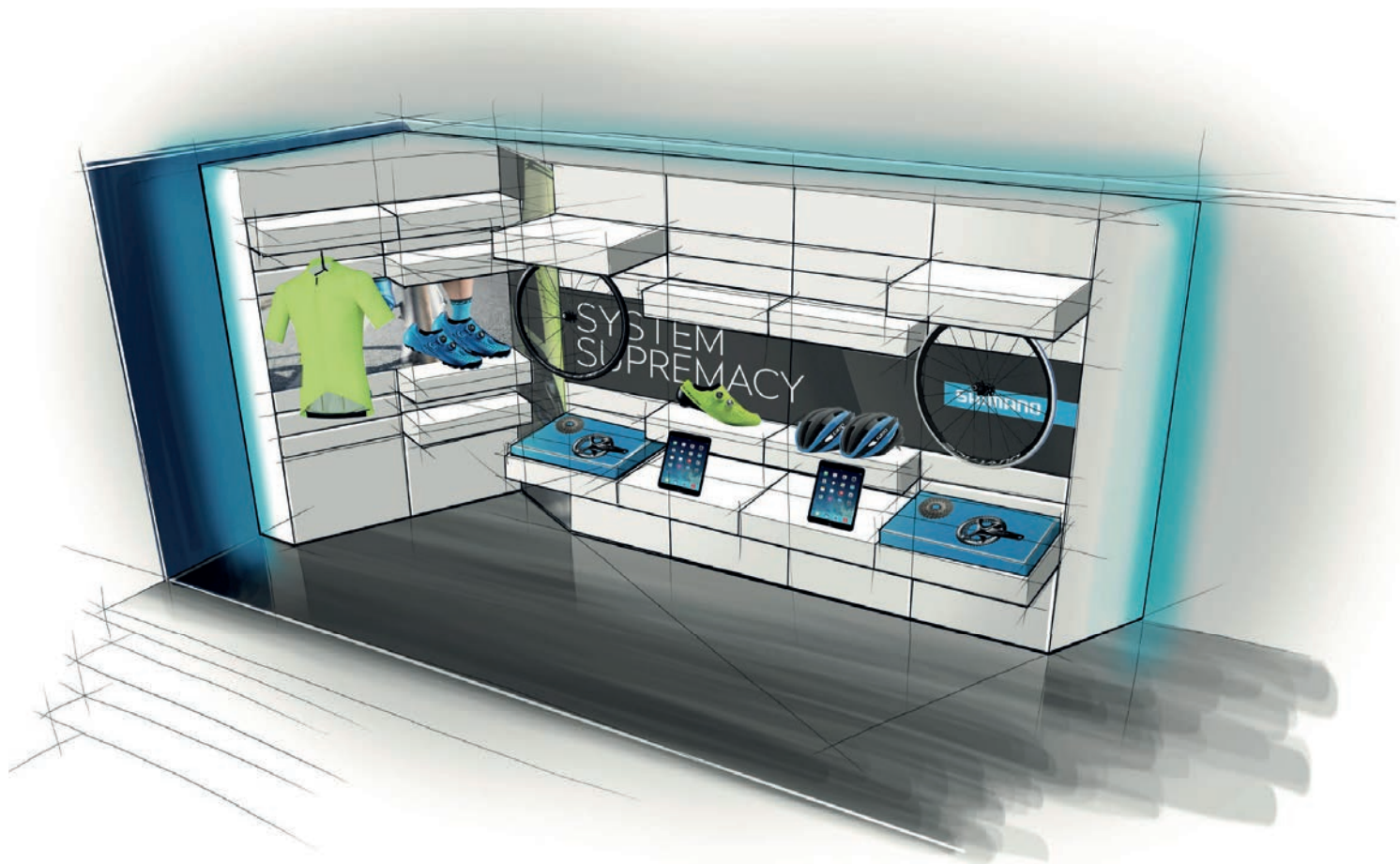
One company that uses the medium of collage on a daily basis is Maerke, a design consultancy office, specialized in branding and strategic design.

Stephan de Wolf and Debbie Grijpink, who 'run the place' and do the actual design work, prefer the term 'mood board' for the collaged compositions, they produce for use in communication with their clients.

They agree that a Google image search is not the ideal medium for finding the most inspiring images. Most of the images they use are not found in paper magazines either. They tend to find the most useful images and image parts on several stock photography sites and on Pinterest, a platform on which photographers and 'image-lovers' share content, well ordered and categorized in a meaningful way.

Upon a client's request, they collect hundreds of images, from which they make a selection and a meaningful ordering, mostly in a geometric composition. These mood boards are used to illustrate the story, their design will be based upon. Before the actual design ideas, it's important to agree with your client on the form qualities, character and atmosphere that should be met in the final design, no matter whether this final design should be an actual product, a package, a website or an interior plan.

In some cases, Stephan mentions, they produce their own photographic content or they hire a professional photo studio to do so – under their close supervision, of course.

EXAMPLE FROM PRACTICE   mærke

*ill. 76/77/78/79/80/81*
*Public seats for the city of Rotterdam.*
*The aim in this project was to create a street furniture programme that resonates the atmosphere of Rotterdam and that adapts to the* *different sites that the city has to offer. In the analyses phase, in which strategic choices are made, this extensive 'context collage' was created; truly a conversation piece that* *made it possible for the ideas of the client and the vision of the designers to meet and to agree upon. Furthermore, we recognize some sketches and several items from the final result.*

NPK, in action for over 30 years, is one of the largest design offices in the Netherlands. The company offers an extensive variety of services, such as strategic advice, service design, industrial, public and graphic design, engineering, prototyping and supply management.
Jos Oberdorf, a part-time professor at IDE in Delft is one of the managing partners of NPK. Being a designer himself,

Jos emphasizes the importance of young designers being trained in imaging concepts and meaning. They should learn to recognize opportunities in the world around us and in the many (high tech) tools that are available today. Being just one of the skills that a designer should master, collage is applied in many different ways in lot of assignments in the portfolio of NPK. Here are a few examples.

EXAMPLE FROM PRACTICE          **n p k | design**

*ill. 82/83/84/85*
*Form study for a soft-ice machine commissioned by Unilever.*
*Selling machines and what they have to offer should convey their message in the split second in which a potential client walks by and, in contrast to a person selling, they should do this in a passive way. Again, at the start of the process, designers and client agreed upon a collaged strategy, avoiding disappointments and misunderstandings later on.*
*In this presentation slides we see a phase with collages and ideas combined, some reference products, sketches and the final design proposal.*

For the appliance:

magic, childhood memories, familiar, indulging
A shape that enhances the 'soft ice cream' experience and dramatizes the creation of the soft ice.

innocent, soft, familiar, friendly, simplicity, fresh

chosen idea

*ill. 86*
*Persona study made in Design Didactics course, presenting the 'vague and long-winded' coach. One may imagine that no-one chooses to be such a design coach. This means you can also find your goals by studying the opposite of what you want.*

## Collage in education

### DESIGN DIDACTICS COURSE AT IDE

(Faculty of Industrial design Engineering, TU Delft)
Besides collaging done in actual design courses, collage can also serve the purpose of other educational activities. Here we give an example, as part of persona studies meant to gain insight into typical personal characteristics of design coaches and design students.

The Design Didactics course is an 'elective' for students who have the ambition to coach novice design students as a student assistant. The collages are being made to explore the different kinds of 'learning behaviour' students may have and what kind of design coach they would like to be themselves.

This exercise is meant to help them make their choice in training subjects, further on in the course. Basically, the image fragments are found during group work, as an answer to all sorts of crispy 'what if?' and 'why?' questions.

Persona studies are not mentioned explicitly in this manual, but clearly they belong to the group we call 'context collage' and can – in addition to for example, 'role playing'– bring insight to a specific group of users.
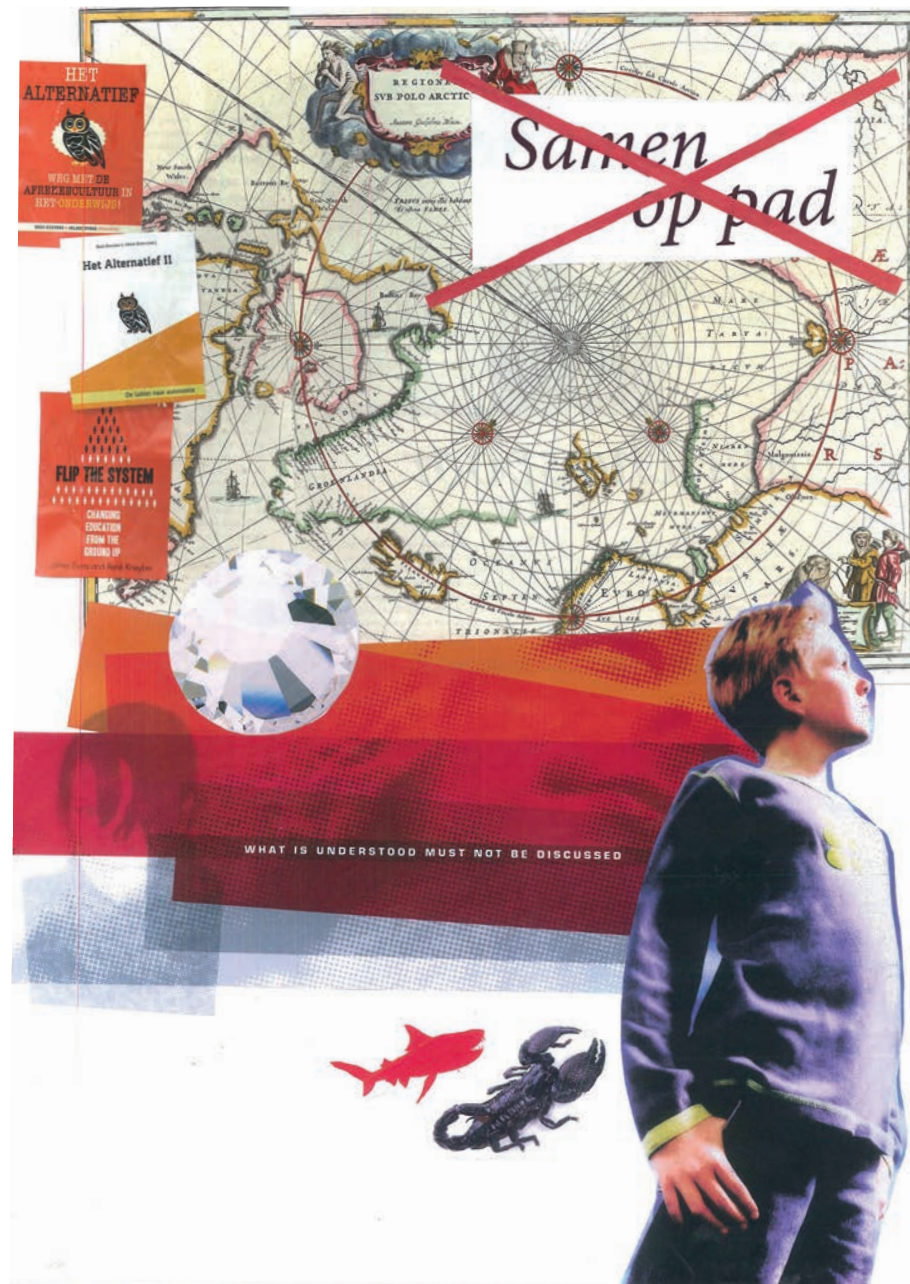
*ill. 87*
*Persona study made in*
*Design Didactics course,*
*presenting the 'independent'*
*student.*

*ill. 88/89*
*Collage by RW.*
*Any page with visual content will do. Try to 'put*
*it' in a different way, turn around the meaning*

*completely or just improve an ugly page.*
*Realize that text is also image; leave useful or*
*meaningful text intact.*

## Collage workout, assignments and exercises

There are a lot of skills to be considered as useful or even necessary for designers. A lot of these skills come down to 'sharpening your view': in a figurative sense, to recognize a problem, to 'see' possibilities and to find the right approach, but of course, also literally, to find and capture inspirational situations and materials, to learn from (good and bad) examples we see in the world around us and to distinguish between what we use and how we use it. The making of collages is surely such a useful skill, which will train your eye. It will help you to find inspiration amongst all the things you see around you and it can teach you to find your own way of

capturing, organizing and accessing this footage.
As stated before: the best way to learn collage making skills is by doing. So, in your work, as a professional or as a student, especially in your design tasks, try to work in a visual way as much as possible.

Having said that, we realize that it may be useful to start your collage making with some exercises, to train this skill, apart from the practical place it should have in your design process. Therefore, the last pages of this manual are dedicated to tasks and exercises that you can do for yourself or in a

workshop situation where you work in a group in order to compare and discuss the results.

1 - ONE-PAGE INSPIRATION
> find an interesting page
> take it apart
> reconstruct it in your own way
> pay attention to meaning, composition and balance.

*ill. 90*

*You can see it all around you, elements, put together, leaving open space to be filled up by another material. The blue sky between two buildings or, here, some moss that covers the earth between plaster stones.*



*ill. 91/92*

*The best way to use the power of negative space is to start with a strong, visual contrast e.g. orange and blue. (left)*
*Move the pieces in the foreground in a way that foreground and background become balanced or let the background 'take over'. (right)*

## 2 - MANAGE NEGATIVE SPACE

> cut (or tear) random pieces of printed paper
> bring them together in a new layout
> take care that the background is showing a balanced form
  (focus on the negative space).

*ill. 93/94*
*Collage by RW.*
*If you use richly illustrated magazines, and especially when you take your fragments out economically, using the 'masking method' you will end up with a battered magazine full of randomly surprising details and see-throughs. Open up your mind and you will find amazing combinations and contrasts that you never would have found the usual way.*
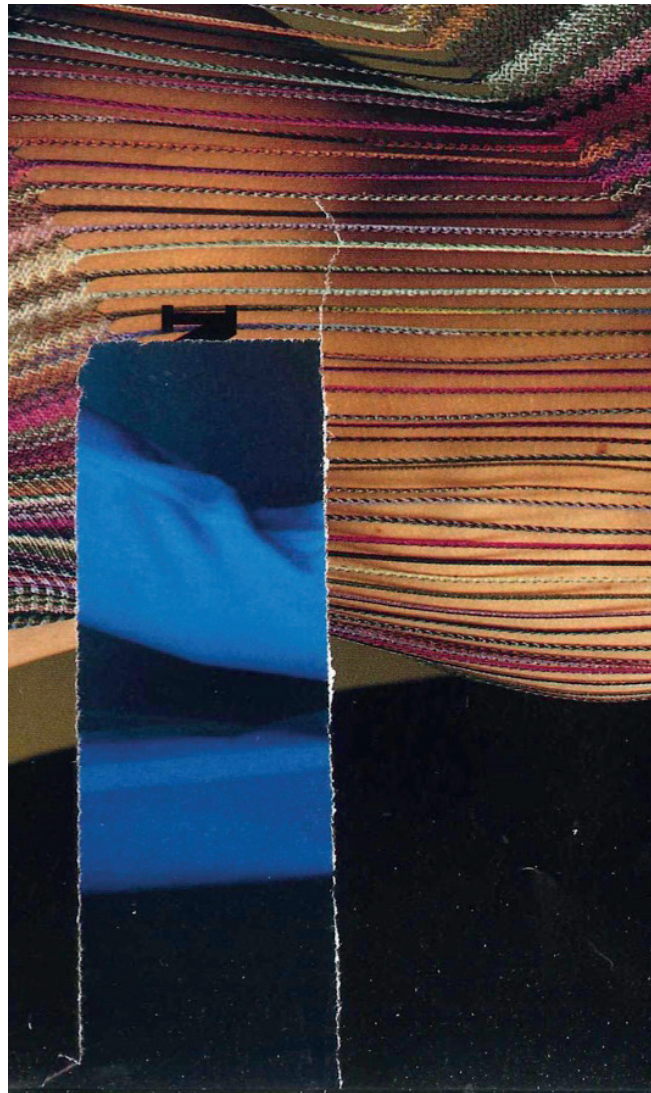
3 - EXPLORE THE ACCIDENTAL
> Take a magazine that was intensively used for collage
> Thumb through its pages and discover completely random image combinations
>  Make a copy or a scan
> Edit an attractive and meaningful image.

*ill. 95/96*
*Suppose, you see an interesting colour combination, some details or intriguing forms in a random image e.g. a photographed interior. A way to investigate opportunities, apart from the meanings that come with this image is to 'shake it up' and puzzle out the way it's useful to your project.*

4 - REBUILD
> Find a photograph of a product or an environment
> Cut it apart into equal, square parts
> Turn it into an interesting, new composition by shifting and rotating.

*ill. 97/98*

*The fun of collage is to use completely random findings and bring them together in a new way to get across or underline your message or idea.*

*This example shows a flyer, found in the wastepaper basket. In the image part of this flyer, there was this slanted, dominant line that was used for chopping it into pieces, thus creating a new, dynamic scene.*

5 - MAKEOVER

> Find a commercial flyer
> Cut it apart
> Rearrange the parts until a different message is conveyed.

*ill. 99*
*Law of Closure*
*This law refers to the mind's tendency to see complete figures or forms even if a picture is incomplete, partially hidden by other objects, or if part of the information needed to make a complete picture in our minds is missing. In this image, you see a study of 4 variants. On the next page, we give you the other 5 'laws'.*
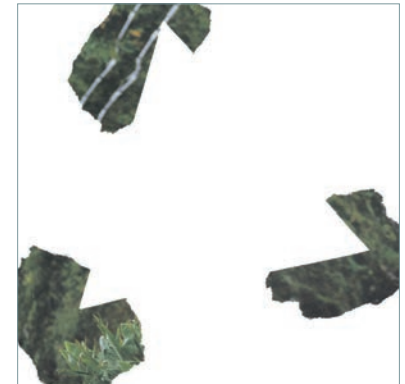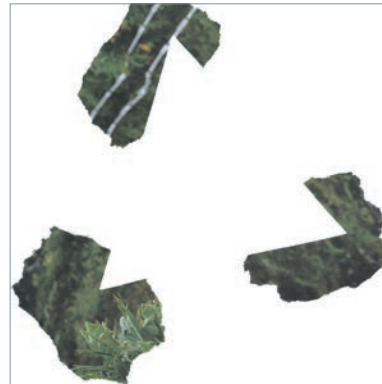


6 - BE A 'GESTALT LAWYER'
> Take one of the gestalt laws (see below) into consideration
> Make an experimental collage to illustrate this law
> Investigate the boundaries of this particular law
> Find out where it starts to 'work'
> And where it loses its validity.
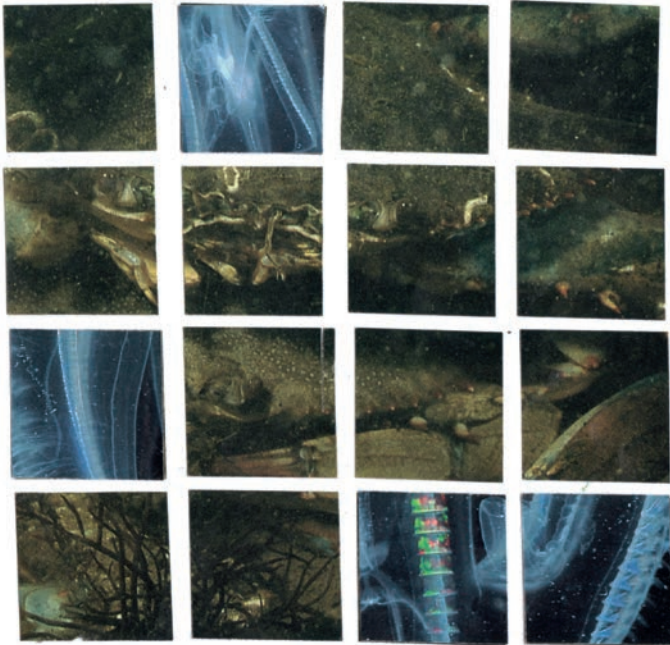
*ill. 101*
*Law of Good Form*
*This principle refers to the tendency to group together forms of similar shape, pattern, colour etc. Even in cases where two or more forms clearly overlap, the human brain interprets them in a way that allows people to differentiate patterns and/or shapes.*
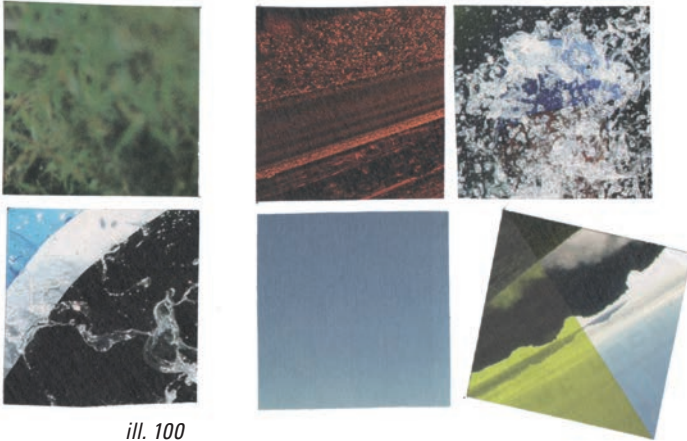


*ill. 100*
*Law of Proximity*
*This law states that "objects or shapes that are close to one another appear to form groups". Even if these shapes and objects are radically different, they will appear as a group if they are close together.*

The principles of grouping were first proposed by gestalt psychologists to account for the observation that humans naturally perceive objects as organized patterns and groups. Gestalt psychologists argued that these principles exist because the mind has an innate disposition to perceive patterns in the stimulus based on certain rules.
These principles are organized into six categories:
Closure, Proximity, Good Form, Continuation, Similarity, and Common Fate.



*ill. 102*
*Law of Continuation*
*When there is an intersection between two or more objects, people tend to perceive each object as a single, uninterrupted object. this allows differentiation of stimuli even when they come in visual overlap.*

*ill. 103*
*Law of Similarity*
*This law states that, all else
being equal, perception
lends itself to seeing stimuli
that are different as part of a
different object. This allows
for people to distinguish
between adjacent or
overlapping objects based
on their visual texture and
resemblance.*



*ill. 104*
*Law of Common Fate*
*When visual elements are seen moving in the
same direction at the same rate, perception
associates the movement as part of the same
stimulus.*

## Recommended reading

This handbook is based on research reported in:
Desmet, P.M.A., & Wormgoor, R. (manuscript in preparation).
*Collage for Product Designers: Techniques for teaching product design students how to make effective collages.*

SUGGESTED RESOURCES



*The collage workbook:
How to get started and
stay inspired*
Randel Plowman (2012)
Lark Books (132 pages)

Helpful overview of design basics, tools, and techniques. In addition, the book provides 50 short exercises, many collage examples, and an image gallery.



*Collage and architecture*
Jennifer A.E. Shields (2014)
Routledge (296 pages)

Covers collage as a design tool in architecture. Artworks and built projects of leading artists and architects are used to illustrate the diversity of collage techniques. Six case study projects give a global perspective of architecture as collage.

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|  | *New creative collage techniques: A step-by-step guide to making original art using paper, color and texture*<br>Nita Leland (2011)<br>F+W Media (160 pages) | Overview of techniques and methods. The guide illustrates 60 collage projects with instructions, tips, charts and glossaries. Seven start-to-finish demonstrations show how to use these techniques. The book includes the diverse work of 60 featured artists. |
|  | *Collage techniques: A guide for artists and illustrators*<br>Gerald F. Brommer (1994)<br>Watson-Guptill Publications (159 pages) | Overview of traditional and modern techniques and materials. Includes step-by-step demonstrations, examples of works by 80 artists, and an exploration of design principles. |
|  | *Cut and paste: 21st-century collage*<br>Richard Brereton & Caroline Roberts (2014)<br>Laurence King Publishing (207 pages) | Collage catalogue with more than 250 images from more than 40 contemporary collage artists. The book presents an eclectic mix of work from illustration to graphic design, street art, book covers, and website design. |
|  | *Once upon a piece of paper: A visual guide to collage making*<br>Andrea D'Aquino (2016)<br>Rockport Publishers (112 pages) | A guide for novice collage makers, providing basic techniques and examples. Includes 50 two-sided sheets of collage papers. |
|  | *The age of collage: Contemporary collage in modern art*<br>Silke Krohn (2013)<br>Prestel Publishers (285 pages) | Historic overview of artistic collages, from the 1920s to contemporary collage. Mostly showcasing current artwork and artists. |
|  | *The age of collage: Contemporary collage in modern art, volume 2*<br>Dennis Busch (2016)<br>Prestel Publishers (320 pages) | Historic overview of artistic collages, from the 1920s to contemporary collage. Mostly showcasing current artwork and artists. |

## Colophon

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