

Jan 13th 2012
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LECTURE ▶



GRAPHIC DESIGN AND RESEARCH: LOVE AT FIRST SIGHT OR AN ARRANGED MARRIAGE?

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Introduction: thanks and outline

This is a lightly edited version of the speaking text of a presentation that I gave on Friday 13th, 2012 in Katowice, Poland. The conference was called: *'Research in graphic design: Graphic design in research'*.

First I like to thank Jacek Mrowczyk and especially Ewa Satelecka for inviting me to come over to Katowice and provide me with this opportunity to give a presentation. It's a pleasure to be back in Katowice. It is an exceptional conference in an exceptional venue.

- I would like to talk about four fairly fundamental questions.
- First, I'll start by giving a description what graphic designers do.
 - In the second part, I'll look at different types of research.
 - Thirdly, I combine these and indicate how graphic design and research are related.
 - And in the end, I'll tell you if they get each other and live happily ever after.

Part 1: Describing graphic design practice

About 5 years ago, I started to investigate professional practice. My university is based in Breda, which is a small city in the Netherlands. I went into the city of Breda and tried to get into contact with the graphic designers who work there. Initially, I just made a list of the companies based on websites, phone directories, yellow pages and so on. Very quickly, we found around a hundred design studios.

We have continued searching since and now have a list of about 170 graphic design companies in Breda. On average, there are about 3 designers in a design studio. And we found about 200 graphic

designers working for advertising agencies, printers, communication advise bureaus and larger companies. So, at the moment, there are about 700 graphic designers in this city of 140.000 people. It is therefore likely that 1 in 200 citizens earns a living as a graphic designer. That is a lot more than we ever anticipated.

But so what? Are all these companies really doing proper design work? Or are they just young university dropouts working in bedrooms with some illegal software? So, we interviewed graphic design companies about their work. We also interviewed information designers, advertising designers, and webdesigners.

Basically, we asked them four questions:

1. What are you doing?
2. Why are you doing this?
3. How are you doing it?
4. How do you know if it is any good?

And what seems to be the case? Is there a general thing that all these very different projects and all these companies have in common? Fortunately, I can say Yes. Two patterns are emerging from these interviews.

Part 2: Two patterns

The first pattern is related to the work that graphic designers do: They develop the shape of visual information. In a somewhat clumsy description we call this: 'they consider the visual configuration'.

The second pattern is related to the decisions that make visual configuration possible. The actual designing is only a part of the activities of graphic designers. There are a number of things that graphic designers need to do in order to consider visual configurations.

First, I'll show you some more details about these two patterns and after that, I'll apply these patterns to research.

Pattern a. Concept development: making ideas visual

All visual designers that we've interviewed work with visual elements. Designers tell us that they work with text, images, schematic elements and inseparable combinations.

For this audience it is of course not necessary, and it might even be an insult, to try to explain what 'visual elements' are. But I also give presentations to lawyers, pharmacists and medical regulators. These people who have little idea that there are different typefaces and how you can modify a photograph.

All designers that we interviewed recognized these types of elements and indicated that they consider these on a daily basis.

Some designers added that these visual elements can also be animated and can be accompanied by sound.

But considering these visual elements can go on forever. But what would be the purpose of these visual changes? Why does a designer select a particular visual configuration? This question leads to a second group of activities of graphic designers.

The second activity is to consider the aims of visual elements, and decide on a 'visual strategy' to achieve those aims. Graphic designers always search for a balance of three aims:

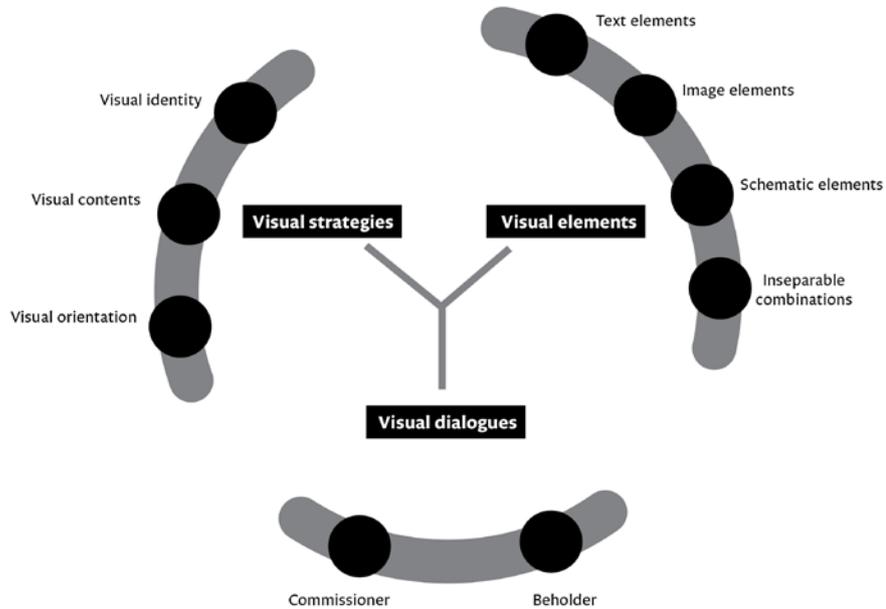
- the visual identity (where does the information come from?),
- visual representation (what is the contents), and
- the visual orientation (where should people start reading, what is the most important).

The designers we interviewed use different words to describe the strategy. However, the answers they provide for a specific design always relate to these three aims.

But considering a visual strategy does still not describe all activities of graphic designers. When they sit behind their very large computer screens, graphic designers can think that these visual aims have been achieved, and that they are correctly balanced. However, they are not the ones who are ultimately deciding. There is a third activity that designers consider.

And that is the relation between commissioners and beholders. I still have not found a word in the English language that really encompasses 'people who interpret visual information'. I've tried 'Users', but that seems to have connotations of drug-abuse. Alternatives like people, readers, viewers, citizens, audience are all too wide or not really appropriate. So I stick to clumsy word 'Beholder' until I find something better.

Graphic designers always work for commissioners. The role of a designer is to clarify the relation between the commissioner and the beholder. Designers anticipate what beholders want to know, and anticipate what commissioners want to say. Visual design shows this particular 'visual dialogue'. Visual design makes the relation between commissioner and beholder visible. So, now we have all three activities of graphic design.



1. **Concept development: Graphic designers develop visual concepts through a simultaneous consideration of visual elements, visual strategy, and visual dialogues. This process aims to combine these three forms of visual argument into a single, all encompassing 'idea' or 'concept'.**

This is what the complete diagram looks like. Visual designers consider three relations at the same time. They consider the visual elements, the visual strategy and the visual dialogue.

During the interviews and observations, it became clear that all these relations are considered simultaneously. Designers switch very quickly from elements to strategy to dialogue and back.

But if all is well, this is not really new for you. This is what all graphic designers do on a day to day basis. This is what we try to sell to our commissioners. This is what makes graphic designers unique: graphic designers are able to consider visual dialogues, visual strategies and visual elements.

However, this diagram shows where most graphic designers stop talking about their work. This is the most interesting part. Until we started asking during the interviews if they really spend all their time on these activities.

Then it came out that this diagram only shows a part of the story. It only shows a first pattern. There is a second pattern that seems to be applicable to most graphic designers too.

Pattern b. Nine reflections.

The starting point of the second pattern is the previous diagram. This is the specialism of graphic designers. They consider the visual configuration of information. But, that is not the only activity they undertake.

A second activity is the organization of projects. Visual designers plan and manage projects. They balance the necessary time, the skills and knowledge requirements, and the associated costs.

This is not a 'one-off' activity. This needs to be done before a project starts, during a project, and afterwards. And if there are several projects at the same time, this organizational activity can become rather complex.

The third activity that graphic designers must do is to persuade commissioners that a design has certain benefits. The arguments that are developed during the designing need to be presented.

Furthermore, designers need to be able to write these arguments down in reports and tell about them in verbal presentations. The arguments need to be structured to make sure that people can understand why a design looks like it does. But even a very convincing presentation can not provide all the arguments.

In some situations, it becomes necessary to undertake another activity. Some designs need to be tested and evaluated. This evaluation can consist of a very informal question to a few colleagues. 'What do you think of this?'. It can also be an elaborate usability test with potential users in an experimental setting. Testing and evaluation is a fourth activity that is considered by designers.

The fifth one are the modifications of a design after it has been approved. Both a commissioner and the results of tests usually suggests some changes to a design. Furthermore, a design needs to be produced and the production environment always has some specific requirements that will affect a design.

All these activities fall under the umbrella of 'realization'. They are all necessary to bring a well thought out visual configuration to the actual beholders.

The sixth reflection is probably the most problematic. A graphic designer needs to consider the situation in which he or she works. This has to do with factors like social, financial, historical, and linguistic issues.

An example of a situation is 'the healthcare system in Poland', or 'the election system in the Netherlands' or 'public transport in Venice'.

Before you can do any design work, you need to have a feeling for these situations. You need to speak the language, recognize the status of people, know a bit about the history, and know about the standard ways of doing things in a particular context.

The seventh reflection is related to a specific problem. It is rarely possible to change complete situations. That would be too upsetting and the results of a complete revolutions are usually unknown.

Designers therefore only look at a particular problem within a situation. They select the boundaries of a problem, usually in a discussion with a commissioner. So, a problem could be considered *within* the Polish Health system, or *within* the election system in the Netherlands or *within* the public transport in Venice.

And in order to approach a problem within a particular situation, it is necessary to consider a perspective or an approach. What would be the most suitable approach to tackle a problem within a specific situation? Should the strategy be based on technology? (How can I use digital devices?), economic (are there cheaper ways to do this?), ecological (the most sustainable way), esthetic (what would be the most attractive result?) and so on.

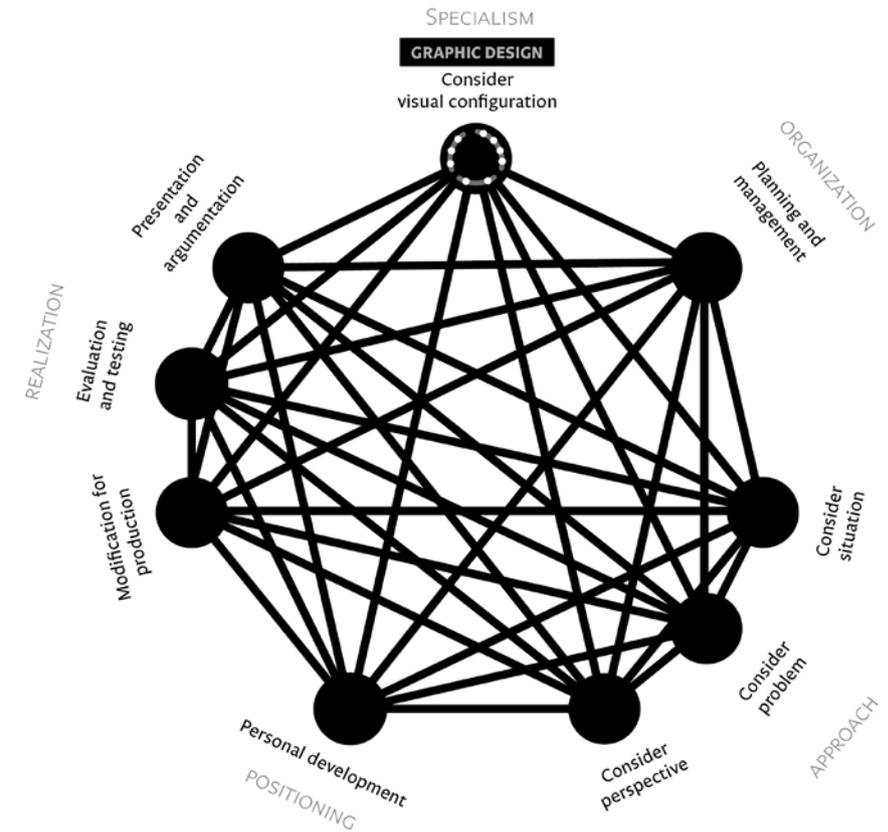
The situation, problem and strategy form together the approach of every project. Every design project needs to consider these because they have an influence on the visual design.

And the last reflection is slightly outside the range that I've shown until now, but nearly all designers indicated that this was an issue that they think about during every project as well. This last reflection considers if a project suits the personal development. For example, if someone asks to design a package for sigarets, or packaging for medicines? Or work for the army? Or for a department that only aims to cut costs in education? These projects might be profitable, but would you like to be related to it? Would your company like to show such a project on your website? On the other hand, some projects are so valuable that you want to do them, even if they don't pay at all. Every project has some influence on the position of a visual designer, and this position is carefully considered by nearly all graphic designers.

So, finally, these are the nine reflections that visual designers talk about when you ask what they do in practice.

Again, this should not be very shocking. This is what we do.

And this is how these nine reflections relate to each other. It is a 'web of actions'. Every action has an influence on all the other ones. And this is what graphic designers seem to be doing all the time. They switch very quickly from one reflection to the next. There is no set path through this web. The next move depends on the results of the previous one. There is no 'right' or 'wrong': the



- The 'web of reflections' shows the activities of graphic designers that are necessary to make the development of visual concepts possible.

decisions are based on experience and knowledge. You don't finish one reflection and move to the next. Designers switch very fast between them, so a complete process can be done in a few minutes, or an hour, or weeks.

This is not my personal view, but it is based on a substantial number of interviews with graphic designers.

The diagram shows that a design process is not linear. Each of the reflections could be used as a starting point. And probably, if you look at your own practice, you can find projects that started by considering different reflections. These diagrams also indicate

what professionals do better than amateurs: they can simply oversee an issue faster because they can relate the reflections quicker. Furthermore, they are likely to be more experienced in all reflections. This is the service that professional graphic designers offer.

At the moment, this seems like an accurate description of graphic design practice at the moment. Now we move to the second part.

Part 3: Three types of research

In this second part, I would like to show you a few different types of research. I've just shown what graphic designers do, now its time to look at the researchers.

I would suggest that there are three different types of research.

There is practical research: that is research related to a single project. Its aim is to support decisions that are related to one specific design.

There is practice based research: that is research related to a class of projects. Its aim is to find patterns and determine the value of these patterns.

And there is academic research. This aim of this type of research is to produce new knowledge.

This is very similar to the distinction in research that is common in the medical world: you have clinical research that is related to one single patient, applied research that investigates a group of patients or a class of problems, and there is fundamental research that looks at the ground rules. I'll show one example of each in Graphic design practice.

The first type of research is the practical research. You need to find information that you did not have before and relate that to your particular project. For example, if you have to design a new logo for a bank or a police force, it is worth checking the logo's that are in use at the moment.

For every project, you need to do practical research. You've got to find out about the situation, the problem and the approach. You got to find out about your commissioner and the beholders. The results will add to your experience, but are not useful for other designers. The scope is limited to a single project.

The second type of research is practice based research. This research tries to find patterns in professional practice and tries to determine if these patterns are effective and could be labelled as 'best practice'. These are the rules of a profession. The aim of this type of research is not to design, but to find and describe developments that occur in practice. Collections of different types of graphic design, for example posters, stamps, logo's, packaging form the basis of practice based research. The results of practice

based research can for example be found in the introductions of catalogues and exhibitions. These texts describe a 'group of projects' and provide a contextual frame. Another example is the analysis of a collection of similar projects to find out how other graphic designers have approached a similar problem. Basically, practice based research show how groups of graphic designers work. Based on this research, it is possible to predict current best practice and future behaviour.

The third type of research is academic research. The aim is not to design something, but to develop new knowledge. To find things that we did not know. Examples are studies into the ways in which people read, understand, interpret and compare visual information.

So, based on this division of research, I would suggest that all three types are essential in all these areas of graphic design.

Practical research is done in all the areas all the time. However, we don't know how well this is done: there are hardly any accepted methods or quality criteria. We simply don't know how good this practical research is. That is a bit worrying.

What is lacking at the moment is the practice based research and academic research in these areas. In these diagrams, we know most about the visual elements: that is where most research has been done.

But we fairly desperately need research into visual strategies and into visual dialogues. We know very little about graphic design commissioners. We don't have practical classification systems to distinguish between different types of commissioners. We also know very little about the ways in which beholders look at our work and how this could be used to modify the design.

We also need practice based and academic research in nearly all the reflections. For example, it would be good to find out how the best graphic designers present their work to the largest commissioners. That would be practice based research. And it would be very nice to have some decent academic research in these areas as well. We need for example comparisons of the evaluation methods, and validations of our problem descriptions. None of that is available yet.

So, all these areas provide very substantial opportunities for all three types of research.

Part 4: Graphic design and research?

Which brings me to the fourth part of this talk. Why do graphic designers need to do research or at least be familiar with the three types of research that I've shown?

Graphic design practice is doing very well at the moment. It is fairly easy to make a decent income in this profession. Why do we need to bother with research? Is it worth the effort, or should we just ignore it and hope it goes away? I think that it comes down to a very



3. Parking instructions in 2011 in Stockholm (Sweden) and Florianopolis (Brazil). A car driver needs to know if it is allowed to park, but the graphic design of these signs do not really provide this information.

fundamental issue. How strong can you make your arguments for change?

If you want to convince someone that your view is worth listening to, you need arguments.

You can base these arguments on your personal opinion and your personal experience. In most graphic design projects, this is probably enough. However, if a commissioner starts asking: 'are you really sure about this?', you need to use different types of arguments.

These different arguments can be provided by the results of practice based research. Best practice and common verified knowledge can be used to support your views. Arguments are a lot more convincing if you can show that a design has worked well in other situations, and that it has been verified.

And if a commissioner keeps asking to provide proof, you need to supply information that is based on fundamental verified knowledge. That is when you need to use appropriate research methods, based on long term research outcomes.

All three types of arguments, opinion-best practice- fundamental, are required. However, not for all projects. For most of the projects that graphic designers currently do, an opinion is enough.

But I'll show you now three situations that need some stronger arguments.

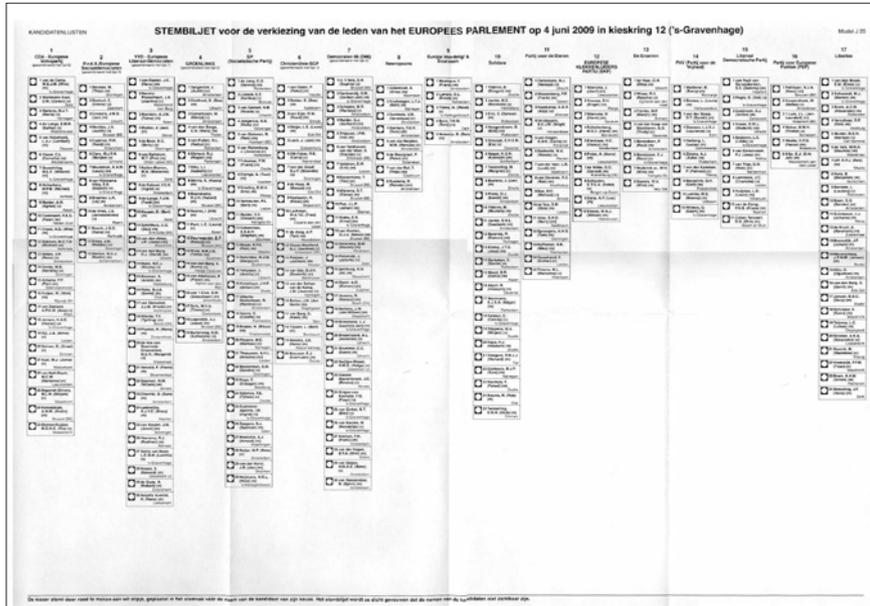
The lefthandside photograph in figure 3 was taken in Stockholm, the other photograph in figure 4 was taken in Florianopolis in Brazil. Once you have passed your driving test, you should be able to decipher these visual concoctions. There is nowhere in the world that has dealt with this situation successfully.

But it is clearly a graphic designers job to make this information clear and understandable. The question is fairly simple: can I park here? If you want to tackle this situation, you need all three types of arguments. And therefore, you need all three types of research to show that these signs are not really satisfactory. It needs your opinion, it needs best practice, and it needs fundamental verified knowledge to convince people that this design is not appropriate. The same three types of arguments are necessary to develop alternative graphic designs.

A second example in a completely different area. Ballot forms for an election. This is an example of a Dutch election form. You should just cross the box in front of a name to elect a person. Simple isn't it?

There are 17 parties. These are placed horizontally. Each party has a number of candidates. These are placed vertically. Even if you know about the Dutch electoral system, this is very confusing. This is a visual design problem. It needs all three types of research to provide the arguments that this is a real problem. Practical research could show the alternatives, practice based research could select best practice amongst these alternatives, and academic research could point to the fundamental problems with this form. This would be the basis for a new design.

Ok, a third example. Financial information. Here you see in figure 6 the Belgian tax form. It looks more like a conceptual piece of art, but millions of Belgians struggle every year to fill in the codes. It's completely incomprehensible without professional guidance. Figure 7 shows a statement of a credit card. It shows the payments that are made over a period of a month, and tells you all sorts of things about the necessity to pay and the interests that you have to pay extra if you don't pay on time. Again, this information is completely visual. And again, it is completely useless. However, to show that these documents are inappropriate from a visual point of view, you need very strong arguments to convince the Belgian government or this South American Bank to change these them. At the moment, we do not have these arguments. We simply have not done the research yet.



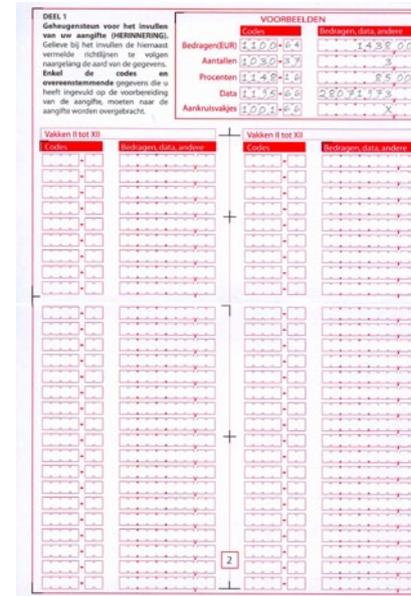
5. A Dutch ballot form for the European elections in 2009. The size makes it difficult to fill in, but also makes it very hard to visually locate the vote when these ballot papers need to be counted.

And it is not only parking information or transport, or the election, or finances. There are several other areas in which graphic design and research are inseparable. There is very little legal information that has been designed well. Teaching materials, healthcare information, nutritional information and most scientific information desperately needs graphic design help. Within all these areas, all three types of research are absolutely essential to provide the arguments to prove that it is essential to change the current situation. This brings me to the conclusions of this presentation.

Part 5: Some conclusions

Is it a sustainable relation? Is there any future in bringing graphic design and research closer together? Will there be a happy end?

It is clear that not all graphic design projects need all three types of research. Most projects can get by with some practical research only. Whatever is practically possible within the available time and budgets.



6. A Belgian Tax form for income tax, and a South American credit card statement. These individualized documents are very hard to interpret.

However, there is a substantial risk involved here. Practical research can only provide one type of argument, and it is likely that there are people who can provide this type of argument quicker and cheaper. And what is worse, graphic designers cannot guarantee the quality of their practical research.

We need to do research in all areas of these diagrams. We need to investigate visual elements. We also need to investigate visual strategies and in visual dialogues. We also need to investigate the different reflections.

As Jorge Frascara said in an earlier presentation 'research is not a luxury, it is a necessity'.

So, back to the main question. What is the relation between graphic design and research? Do they really get each other in the end and form a happy couple ever after? And the standard answer of the design consultant applies here too: 'it depends'.

It seems that graphic design and research have already found each other, but only in the area of practical research. Most projects



require some form of practical research, but we don't know yet if this is the most suitable and effective form. It's still in the butterfly stage – no firm commitment yet, but still a lot to discover in each other.

However, if we talk about practice based research, than the relation between graphic design and research can be seen as an arranged marriage. This relation is essential, especially in graphic design education, but in practice it is really forced marriage. It might still work, it is essential, but both parties are not really interested at the initial stages. It's hard work but like all arranged marriages, the success rate is fairly high.

For academic research, there is still hardly any relation at all. The partners have heard from each other. And both dream how wonderful a shared future could be. There are only a few dozen couples on this planet where a relation to academic research and design has been established.

It is clear that our societies need graphic designers to survive, just like humans need relations to survive. If we don't relate research and graphic design, it is likely that people can't park, can't vote, can't pay taxes, can't pay invoices and can't take medicines.

As graphic designers, we simply need stronger arguments to convince people that a lot of visual information needs to change. That is a substantial responsibility of graphic designers. And we have to develop these arguments ourselves. Nobody is going to do the research for us.

Thank you.

Karel van der Waarde (NL)

Karel van der Waarde studied graphic design in the Netherlands (Eindhoven) and in the UK (Leicester, Reading). He received his doctorate in 1994 for a dissertation entitled: "An investigation into the suitability of the graphic presentation of patient package inserts". In 1995, he started a design – research consultancy in Belgium specializing in the testing of information design. Most of the projects are related to information about medicines for patients, doctors and pharmacists. Typical products are information for patients (Bayer Pharmaceuticals, GSK, Proctor & Gamble, Novo Nordisk, Genzyme, Millennium Pharmaceuticals, Omnicare, Tibotec, Centocor, ...), information for doctors and pharmacists (Ministry of Health, Brussel; BCFI, Ghent), labelling, and design of hospital protocols. Other projects are for example the development of user instructions for Philips, tax-form analysis for the Dutch Taxoffice, readability research for the Open University Netherlands, and information architecture for websites. Karel van der Waarde is also professor in Visual Rhetoric at AKV|St. Joost, Avans University, Breda (The Netherlands). He is on the editorial boards of "Visible Language", "Information Design Journal", "The Poster" and "Iridescent" and was editor of Information Design Journal between 2000 and 2004. He is board member of the International Institute for Information Design (IIID) and a life-fellow of the Communication Institute of Australia (CRI).

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