

Marie



Marie

"transforming information"

IIID VisionPlus Conference

Sept-4/5, 2014, Vienna



International Institute
for Information Design

BUNDESKANZLERAMT ÖSTERREICH

Understanding

WALLER Robert
PERKS Sue
FRANK Diana
SKOPEC David
GRIESFELDER Roman

City & Society

SANDNER Günther
STUDZINSKA Malwina & JANCZUKOWICZ-CICHOSZ Ewa
ZIMMERMANN Nicole & ZIFKO Matthias
DE HASETH Joshua

Workshop

RUHL Glenn

Marie Memories

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Spaces

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Short Stories

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What transformers need to know and do: Influences from other disciplines

Waller Robert
The Simplification Centre London - UK

The transformer role is a recognition that explaining is a distinctive skill and role, separate from those of the graphic designer and the content expert. It could be seen as a rebuke to both, implying that graphic designers are better at designing than thinking, and that social scientists are better at counting than explaining. In their best known statistical graphics, the Isotype transformers dealt with quite a narrow range of communication issues (social and economic statistics) and a limited expressive grammar. But when the concept is applied more generally, there is no limit to the content or the expressive channels that a transformer might be expected to handle. So what is the range of communication skills that we might expect a modern transformer to have? And what range of skills might we expect to find in the general literacy of content specialists. This paper will compare and reflect on three sets of communication disciplines and concepts from the past work of the author: a paper from 1976 entitled 'The Transformer' by Michael Macdonald-Ross and Rob Waller; a paper from Vision Plus 2 on 'How the disciplines work together', and a curriculum developed for an information design qualification at the University of Reading, UK, aimed at people working in communication roles in organisations.

What transformers need to know and do
influences from other disciplines

The Isotype transformer role is a recognition that **explaining is a distinctive skill**. Not all graphic designers or content experts have it.

It is perhaps **a rebuke to both**, implying that graphic designers are better at designing than thinking; and that social scientists are better at counting than explaining.

Notes from a paper given at IIID Vision Plus: Transforming information Vienna, 4-5 September 2014.

Rob Waller
The Simplification Centre
London

In their best known work, Isotype transformers used a limited expressive grammar. But when the concept is applied more generally, there is **no limit to the content or channels facing a transformer**.

So what disciplines should be included in a transformation curriculum? The next three spreads summarise approaches to this question, from three eras in my career.

1976
The Transformer by Michael Macdonald-Ross and Rob Waller, published in the Penrose Annual.

1995
How the disciplines work together, a paper presented at Vision Plus 1.

2010
Information design theory cards: a curriculum developed for an information design qualification at the University of Reading, UK.

1976

The Transformer by Michael Macdonald-Ross and Rob Waller, published in *Penrose Annual*.

Background

Michael Macdonald-Ross led the Textual Communication Research Group at the Open University in the UK, a pioneer of distance learning. I worked in the group (my first job) with Michael and Peter Whalley, a cognitive psychologist.

Academics worked with production professionals (editors, designers, illustrators, TV technicians). They were helped by mediating professionals such as education technologists and TV/radio producers.

We saw the Transformer as a model for this mediation – to focus on the student, rather than academic worth or high production values alone.

The Transformer role was implemented most fully in the Open University's Continuing Education programme, and Michael Macdonald-Ross also introduced it to the British Museum (Natural History).

Two important reviews by Michael Macdonald-Ross

Graphics in texts. *Review of Educational Research* 1977 5:49–85.

Language in texts. *Review of Educational Research* 1977 6:229–275.

Content

What to say

Purpose and objectives
Tasks and errors
Organising principles
Facts
Arguments
Bias

The Neurath's talked about 'graphic argument': transforming is as concerned with content as much as form.

To act as the 'trustee of the public', transformers need to challenge the integrity of content as well as to present it effectively.

They need to ask 'why are we saying this?', 'why is it relevant?', and 'what is omitted?'.

Form
How to say it

Language
Links to the reader's world
Typography and graphics
Actions
Organisers and signposts
Feedback

While the Isotype Institute mainly focused on graphic charts, extending the transforming concept to education widens the transformer role.

It is about language, context, and navigation, as well as graphic design.

'Feedback' does not carry it usual meaning of user comments. It refers to ways to help users check their own understanding of the content.

Users
With what effect

Testing

"The transformer is overseer of the whole process of communication – what is said, how it is said and what its effect is. They work with colleagues whose skills are more specialised to make sure the message gets across and to reduce the chance of communication breakdowns. Transformers act on the reader's behalf as best they can, sorting out the kind of issues a reader might raise if they were present in person."

Finding this paper

The Transformer was republished in 2000 as 'The transformer revisited' in *Information Design Journal* 9:177–193

1995

Information design: how the disciplines work together

a paper presented at Vision Plus 1, Götzis, Austria.

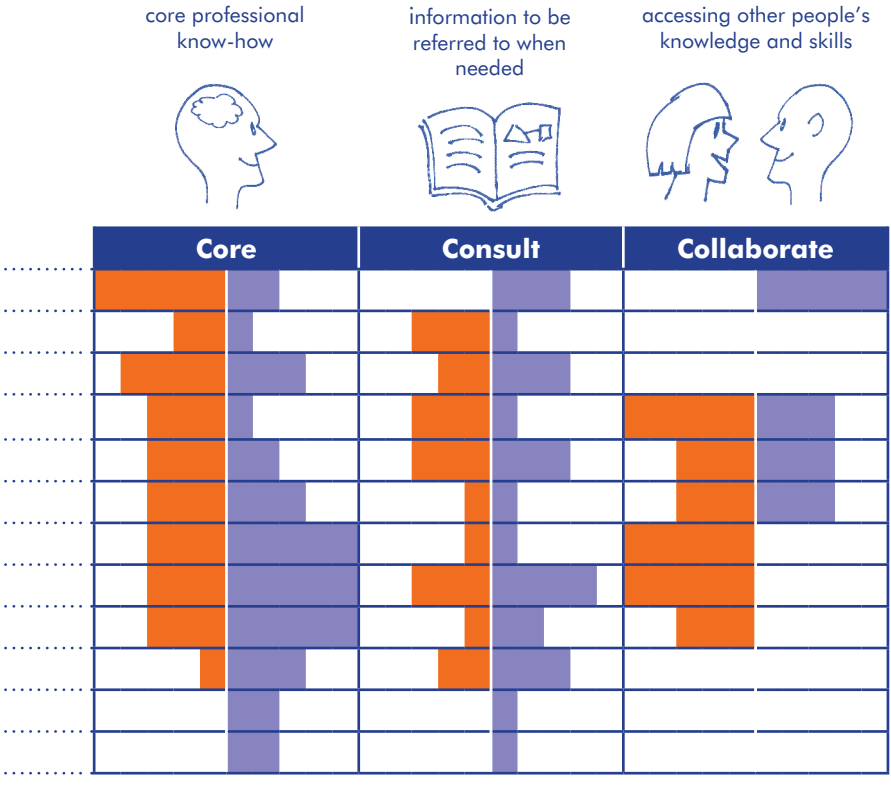
Problem	Knowledge source?
It looks awful	Graphic design
They can't see it	Psychology of perception
It's unfamiliar	Design history, genres
They can't load the page	Web technology, coding
They can't use it	Applied psychology, UX design
They don't want it	Marketing, branding
They can't find what they need	Content architecture
They don't understand the words	Plain language, literacy
It is boring	Journalism, rhetoric
They don't understand it	Cognitive psychology
They can't follow the argument	Text linguistics
It doesn't speak in their voice	Sociolinguistics

For this 1995 presentation, IIID Director Peter Simlinger asked me to consider how different specialisms relate within the relatively new field of information design.

I listed the different skills and disciplines I had encountered in my education and professional practice, together with the problems they might solve.

It's a wide range. So can one person acquire *all* the skills of the transformer? Or is a transformer a team rather than one person?

Whichever it is, I believe everyone involved in transforming information needs an urgent curiosity about how humans understand the world, how they express knowledge, and how they communicate.



In my experience, transformers arrive at their role from one of two directions.

Design-led transformers (shown in red above) have moved out from the mainly visual focus of their training. Content-led transformers (shown in purple), are usually writers who have become interested in visual communication.

Each role has a distinct set of **core** skills. And as reflective practitioners, they will have an awareness of other fields, to be **consulted** from time to time. And they will regularly **collaborate** with other professionals.

Finding this paper

Rob Waller, *Information design: how the disciplines work together.* 2011, Technical paper 14, London: Simplification Centre. www.simplificationcentre.org.uk/resources

2010

Information design theory cards: theory workshops developed for an information design qualification.

Background

Between 2008 and 2011, the Simplification Centre was based at the University of Reading. We were funded by member organisations, to whom we provided document appraisal, training and consultancy.

HM Revenue & Customs encouraged us to set up a university-accredited qualification in information design, aimed at staff in their customer communications team. Most of the students had taken on the role of document designer from clerical positions in tax offices. They understood the content, worked well with the corporate style and templates, but needed a deeper understanding of design principles, users and channel strategies.

Design is usually taught as a creative, hands-on activity, through projects and critiquing. Theory, if present, may be introduced later in the curriculum.

We decided to *start* with basic theories from multiple disciplines. But we treated theoretical knowledge as tools, and only admitted theories to the curriculum if they work in that way.



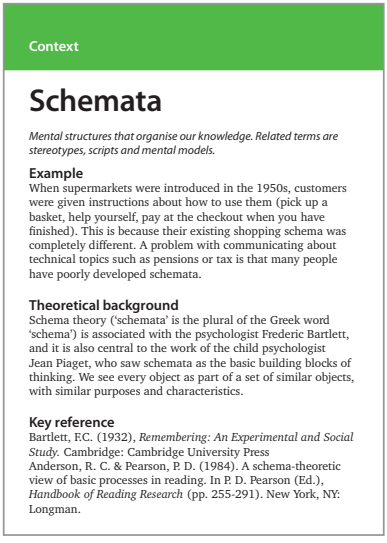
Theory cards

Inspired by exam revision notes we remembered from school, we summarised a range of key concepts on A6 cards.

Most follow a consistent pattern:

Name
Definition
Example
Theoretical background
Further reading.

For some modules, the cards cover tools and design methods, rather than theory.


Context

Schemata

Mental structures that organise our knowledge. Related terms are stereotypes, scripts and mental models.

Example
When supermarkets were introduced in the 1950s, customers were given instructions about how to use them (pick up a basket, help yourself, pay at the checkout when you have finished). This is because their existing shopping schema was completely different. A problem with communicating about technical topics such as pensions or tax is that many people have poorly developed schemata.

Theoretical background
Schema theory ('schemata' is the plural of the Greek word 'schema') is associated with the psychologist Frederic Bartlett, and it is also central to the work of the child psychologist Jean Piaget, who saw schemata as the basic building blocks of thinking. We see every object as part of a set of similar objects, with similar purposes and characteristics.

Key reference
Bartlett, F.C. (1932), *Remembering: An Experimental and Social Study.* Cambridge: Cambridge University Press
Anderson, R. C. & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading. In P. D. Pearson (Ed.), *Handbook of Reading Research* (pp. 255-291). New York, NY: Longman.

Using the cards

The cards are organised in colour coded sets and provided as a swatch.

We ask students to bring examples of good and bad documents to the workshop, when they are critiqued in groups.

As they are discussed, tutors spot opportunities to introduce the theory cards.

So, someone might mention a long and convoluted sentence. The tutor introduces cognitive load.

Someone points out that parts of a document appear to form a set, but are actually unrelated. The tutor introduces the Similarity Principle.

Soon the students start to search for their own applications of the cards, and we quickly make the connection between theory and practice.

The cards give theories a physical presence in the workshop – in view, potentially useful, and demanding attention.

Finding this paper

Jenny Waller, *Professionalising functional communications: what practitioners need to know*. 2011, Technical paper 12, London: Simplification Centre. www.simplificationcentre.org.uk/resources



The role of the Transformer at the Natural History Museum 1975-1991

Perks Sue
University Creative Arts Epsom - UK

The transformer is someone who is working on behalf of the audience and intermediary, someone who mediates between the experts and the lay audience you're trying to communicate with.' (Roger Miles 2008). The transformer stems from Isotype, originated by Dr Otto Neurath in 1925 for use at the Gesellschafts- und Wirtschaftsmuseum. In 1975 the Natural History Museum in London took a leap of faith when Miles and his team adopted the fifty-year old role of the transformer to develop their 'New Exhibition Scheme'. This way of working has had a fundamental influence on the design of educational exhibits ever since. This paper will examine the role of the transformer in the Natural History Museum's New Exhibition Scheme (1975-1991) when the museum redefined the way they presented exhibits to their audience, fundamentally changing the role of the designer in museums from 'window dressers' to 'skilled professional communicators' – a term coined by Mcdonald-Ross and Waller in their 1970 paper 'The Transformer'. It will discuss the impact and legacy of this important scheme in a contemporary context.

How the role of the Isotype transformer shaped the Natural History Museum's 'New Exhibition Scheme' during the 1970s

'The transformer is someone who is working on behalf of the audience and intermediary, someone who mediates between the experts and the lay audience you're trying to communicate with. It seems strange, you would think haven't museums always been doing that? And I think manifestly not when you look at the work that had been done. Often, exhibitions, mounted by subject specialists, not only missed museum planners' work, but were for a specialist to show other specialists that they were fully up-to-date with their subject. No thought was given to the audience at all.' Roger Miles

The Natural History Museum's adoption of the role of the transformer during the 1970s in the 'New Exhibition Scheme' (NES) was seen as a radical experiment to change notions of user-centred design. Roger Miles originated the scheme that lead to the development of 'Museum technology', a pragmatic body of objective knowledge that could be applied to the design of educational exhibitions. Miles cited Isotype as the 'inspiration' behind NES, which ran from 1975-91, beginning with the Pilot project, 'Human Biology, an Exhibition of Ourselves', which opened in 1977.

This paper will examine why the NHM adapted a methodology conceived in Vienna fifty years earlier to redefine the role of the transformer in the context of a national museum, It will center on the collaborative relationship between scientist and designer – the transformer partnerships and their role in the evolution of educational visitor-friendly exhibitions.

Background: Neurath's work in museums
Otto Neurath formulated Isotype for use at the Social and Economic Museum in Vienna during the mid 1920s to provide the worker with unbiased information on important social issues. Neurath's museum attracted many thousands of visitors, who enjoyed the convivial atmosphere and leisure time opening hours. It contained entertaining opinion-forming charts and treated the audience as equal partners, not as an uneducated underclass. The charts were devised using transformation.

This is how Marie Neurath described transformation...
'To understand the data, to get all necessary information from the expert, to decide what is worth transmitting to the public, how to make it understandable, how to link it with general knowledge or with information already given in other charts. He has to remember the rules and keep to them, adding new variations where advisable, at the same time avoiding unnecessary deviations which would only confuse' Marie Neurath

Transformation (along with educational technology and Karl Popper's ideas on evaluation) was cited by Miles as the three main contributing factors that went into the development of NES. Miles envisaged the role of the transformer as a partnership between 3d designer and scientist whose role was to make complex scientific ideas come to life.

Anticipating the need for the transformer within museums
Museums Journal during the 1960s and early 70s paint a lively picture of museums struggling to come to terms with visitor-centred displays. In the 1950s few UK museums employed full-time designers, but numbers swelled during the mid 1970s as the need for designers as communicators was slowly recognized,

As more museums began to employ in-house designers, two divided camps emerged. Traditionally the curator selected exhibits and wrote text. The designer serviced the graphic needs of the curator – a role described as 'window-dressing' by commentators of the time. Museums Association Annual conferences during the early 1970s summarised situations that could impede communication and lead to poorly functioning exhibits:

- dominance of designer or curator
- curators who employed designers as extensions of themselves
- scholarship seen as a barrier to communication
- failed dialogue between curator and designer

The need for a mediator between curator and designer envisioned in the role of scriptwriter, content editor, interpreter, or communicator was discussed. According to Miles before NES, the needs of the audience was not being considered by curator or designer, The discipline of communication was neglected and graphic designers approached the design of exhibits as they would a magazine spread. Before NES the activities of a NHM designer amounted to 'sugaring the academic pill', and exhibitions were 'organised along the lines of graduate textbooks, Miles sums up the balance of professional input needed to take a visitor-centred approach forward. It is essentially a description of the transformation partnerships:

'If the specialist is concerned to communicate his knowledge and expertise, and if the designer is concerned with design for communication, then they share substantial common ground. This is also the ground of the educationalist; so all three are engaged in the same pursuit. The problem now becomes getting all three together, so no one is over shadowed'. Roger Miles

What effect did these ideas have on the NHM?
The NHM felt that it was losing its way during the 1960s and failing to live up to the 1753 Act that brought about its existence. 'The said museum or collection shall be preserved and maintained not only for the inspection and entertainment of the learned and curious, but for the general use and benefit of the public'.
A number of different elements were coming into play as factors to be considered alongside the display of specimens in museums – television, universal education, the development of mass media, a huge growth in scientific knowledge and a more experimental approach to biology. The public had more leisure time to make use of it all, but museums were slow to recognize their social importance.
The old style of exhibitions was failing because they were static, subject-focused, and not visitor-orientated. Galleries were perceived as lacking in coherence, dull, technical and badly in need of updating. The role of the museum was changing from being a storehouse of objects to a questioning study of the world and the NHM needed to exploit its scholarly and pedagogic resources to accommodate this.

How did it do this? The development of the New Exhibition Scheme
'It's a long story how we came from starting to plan the 'New Exhibition Scheme' and concentrating purely on the subject matter, to realising it was more about communication than it was about biology. The key was shifting from being subject matter oriented to visitor-oriented, and asking what do we need to do to function as transformers in the museum? Neurath gets the information from the specialist and then tells people what to do, so our key thought was in transformation. We are going to give equal weight to the science and the design; and transformation should be carried out by a partnership of equals, a scientist and a three-dimensional designer'. Roger Miles

In 1968, The director, Frank Claringbull took the radical first step in updating the galleries, forming the first initiative towards a unified exhibition the 'New Exhibition Scheme' (NES), policy. He began by removing control of the galleries from the 5 heads of the Science.

The development of NES took many twists and turns before a satisfactory way forward was found. The primary concern was to consider the Museum as a 'social institution' and develop 'an organised body of knowledge to enable this to happen. The audience was identified as the 'interested layman' and a pilot project entitled 'Being and Becoming' on the life of man was devised to test out the Museum's ability to carry the pilot project forward.

Educational technology was considered as a way forward combined with the identification of behavioral objectives, but over-complexity made the scheme unworkable. It was too subject-focused and not visitor-focused enough. Michael Macdonald-Ross (of the Institute of Educational Technology at the OU) had written to the Director of the Museum informing him that he was faced with 'logistical and management problems that the Museum had never faced before' – if the pilot project was to succeed by 1977. The last gallery 'Fossil Mammals' had taken 11 years to complete, NES had two years to be completed.

On 1 January 1975 Miles was appointed head of the newly formed Department of Public Services (DPS) with responsibility for all of the Museum's biological galleries. His task was to bring NES to fruition. The renamed 'Human Biology' was planned to open in 1977. Miles had quite a task on his hands as archive records show.

Factors that went into the final realisation of NES
Miles cites three main factors that went into the final realisation of NES: Isotype, Educational technology, and Karl Popper's 'trial and error' approach to evaluation. These provided the inspirational, pragmatic, and theoretical elements that helped form Museum technology – Miles' emerging objective body of knowledge for the design of educational exhibits.

Inspirational
Isotype formed the inspirational influence to NES, Transformation was responsible for forming the team structure in DPS, Macdonald-Ross had read of Neurath's work in museums and used transformation to design course units at the Open University and suggested that it could be a worthwhile area for the museum to investigate.



CURATOR → DESIGNER → TEACHER

selects objects and writes labels

makes things look good (damage limitation)

makes the best of things after the opening

Pragmatic
Educational technology formed the pragmatic project control system to drive NES forward, develop exhibits and define the team structure – which is where the 'inspirational' idea of the transformer fitted into the 'pragmatic' educational technology, to provide a 'systematic, problem-solving approach to education', Other ideas put forward in the guise of educational technology concurred with Isotype in particular avoiding an over-saturation of information ('less is more').

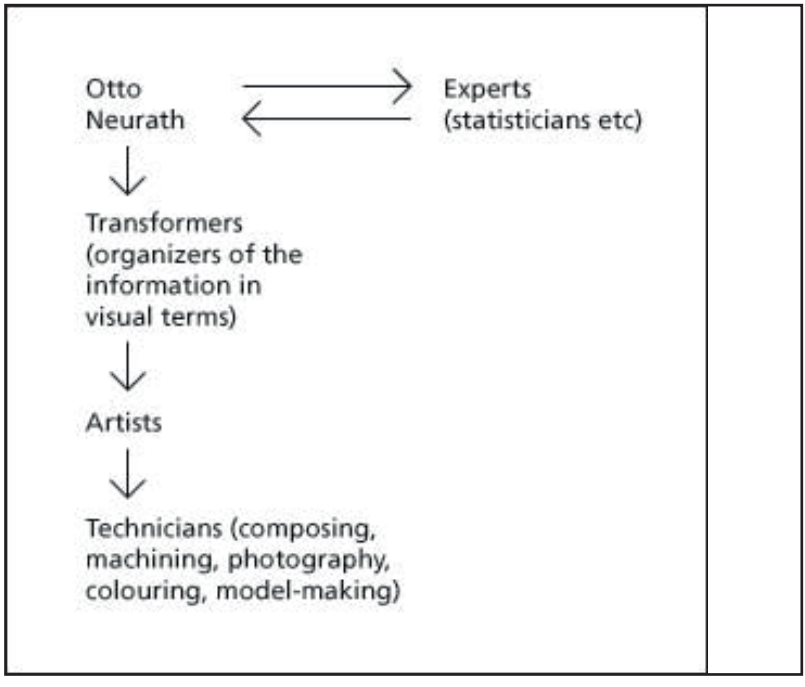
'In developing the Exhibition Scheme we are attempting to apply the concept of transformation in wider fields than Isotype charts and diagrams, including three-dimensional design, but still with its basic meaning. We particularly associate it with the construction of analogies or conceptual bridges, whether in the form of graphics models or interactive devices'. Roger Miles

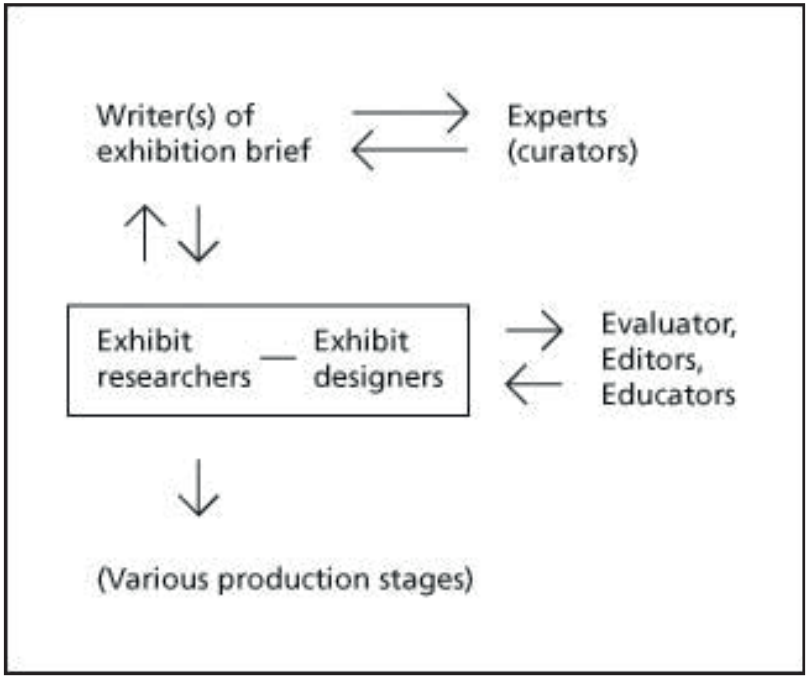
Analogy is a common tool in educational technology and refers visitors to a known idea enabling them to understand an alien concept. It forms a much broader interpretation of Neurath's antimetaphysical principles. Miles (and other transformers of the time) cite the cortex exhibit (which compares the brain to scrunched up sheet of newspaper) as being a good example of the NHM's adapted definition of transformation to include analogy.

Theoretical
Ideas taken from Karl Popper formed the theoretical 'trial and error' approach to evaluation in NES – taking small steps at a time and continually evaluating results. Popper believed that no amount of positive responses could prove that something was right, but a single negative could prove that it was wrong. Popper's theories (as seen in the Exploratorium and Lawrence Hall of Science) provided a framework for the evaluation section within the NHM and led to the Museum becoming known as a pioneer in this field in the UK.

The reception of the NES pilot project: 'Human Biology'
On 24 May 1977 the renamed pilot project 'Human Biology an Exhibition of Ourselves' was opened by Shirley Williams (then Secretary of State for Education). The Director pronounced it 'Stunning, a foretaste of a revolution'. It was introduced as an experiment to test out 'Museum technology' and widely acclaimed by the public, who flocked to see it, Visitor levels reached over 3 million in 1977 and surveys indicated that it was the most popular permanent exhibition that the NHM had ever produced. The Museum felt that it had justifiably begun to create an enjoyable, visitor-centred approach.

Professional acclaim
'From the professional point of view, the Hall is mandatory viewing for all curators. The role of the educationalist in museums has been one of the great debating points over the last ten years. This Hall, with so many unusual exhibits presented with the philosophy which differs radically from that of traditional curatorship, reveals something of what the educationalists have been trying to tell us (and sell us) for a long time'. Museum commentator


Otto
Neurath
Experts
(statisticians etc)
Transformers
(organizers of the
information in
visual terms)
Artists
Technicians (composing,
machining, photography,
colouring, model-making)


Writer(s) of
exhibition brief
Experts
(curators)
Exhibit
researchers
Exhibit
designers
Evaluator,
Editors,
Educators
(Various production stages)

The Hall of Human Biology was praised for its
• application of current research in psychology and education, the designer/scientist transformer partnerships, the development and application of 'Museum technology' and its visitor friendly approach
• it covered new ground in dealing with human biology on such a large scale through ideas and processes
• it was constructed as a new stand-alone modern interactive environment within the NHM,
• content was pitched at two levels – the majority suitable for a fifteen year old with 'Enrichment Assemblies' and a book for further reading.
• the structure of the learning hierarchy was based around a strong storyline with the rational arrangement of interactive ideas broken down into 'mind sized chapters' to help the visitor explore and be motivated to find out more.

Criticism
But the Hall of Human Biology was heavily criticized by curators jealous of Miles' freedom to experiment, they were also fearful that they may be forced to adopt similar techniques and lose their curatorial control. Their concerns can be seen in letters from Museums Journal from 1977-78:
• a huge amount of money spent on 'an experiment'
• there were technical imperfections and conceptual inconsistencies in terminology which hampered visitor comprehension
• it was badly located in such an important architectural setting
• it lacked exhibits in a traditionally exhibit-rich institution
• funds should have been used to maintain the 'Museum's long tradition of academic excellence'.
• it 'dumbed down' information

The exhibition was also likened to 'a kind of lewd offal-shop nightmare' [that] 'escaped curatorial control and fell into the hands of pure, tasteless communicators'. A 'tainted' fairground 'tunnel of love' a 'cheap disco' and a 'hideous portent of modernization yet to come',
Miles comment was that it was an experiment to show the way forward. It was not perfect.

Evidence of the 'inspirational' influence of Isotype in NES
The influence of Isotype can be seen in many layers of the Museum's working practices. This memo shows what an eye opener it was.

The designer/scientist transformer partnerships
These diagrams show how a model adapted from Neurath's Museum in Vienna was used to develop NES.

This diagram shows the traditional curator/designer approach used before NES was introduced in 1975. The curator is responsible for the exhibit and makes Neurath's 1925 team model look all the more radical when compared with this traditional approach to designing museum exhibits. Miles 1975 team model links the exhibit researchers and exhibit designers with the role of. Both team models have 'experts' at the top of the table, and both include transformers.

Miles employed designers and scientists (or content developers) with the right academic backgrounds to work in designer/scientist partnerships. The majority of designers came from a three-dimensional background. The title 'transformer' does not appear within job advertisements of the time, but appears frequently within documents found in the archives.

Transformation Reader
Transformers contracted circa 1975-80, were given a booklet on transformation as part of an intensive induction. The booklet was intended as 'a framework from which communicative exhibits are created'. It contains extracts from papers and books on Isotype, educational technology, learning theory and museum planning by experts in aspects of communication.

From interviews with transformers it is apparent that Isotype was considered as a starting point in the design of educational exhibits,

Visual evidence of Isotype in NES
Exhibits from 'Introducing Ecology' (1978) show simple examples of the visual ordering of information. But 'Discovering Mammals' (1986) shows evidence of repeated units and comparative information. But the most innovative adapted example of the principles of Isotype is seen in 'Massive Mammals'. By standing on a scale the computer calculates how many units of the visitor make up the weight of a blue whale, an elephant or a camel – an inspired example of how technology can extend the reach of Isotype.

The transformation partnerships
The following quotations show the effect that transformation had on the designer/scientist transformer partnerships.

'So our key thought…was in transformation. We are going to have to give equal weight to the science and the design, and that the transformation should be carried out by a partnership of equals, one a scientist and one a three-dimensional designer […] 'Transformation' was much more the buzzword and philosophy for me. I found it very exciting, to be asked to think hard how to 'transform' information into something that a non-scientist could understand […] Transformation was about hooking and holding them, starting where they were…' NHM Transformers

To recap, what effect did these ideas have on NES?
• the designer/scientist transformation partnerships allowed the designer to take a critical role in the communication process, removing curatorial control
• The Design of Educational Exhibits written by Miles in collaboration with Alt, Gosling, Lewis and Tout in 1982 offered practical guidelines on how design educational exhibits
• Museum technology – an experimental new museum philosophy with sound pedagogical issues a visitor-centred approach allowed the Museum to succeed in re-interpreting its founding mandate as a social institution.

The end of NES

From 1975 to 1991 ten permanent exhibitions were produced at the NHM. The appearance became more traditional as specimens were integrated into the original specimen-light concepts. But by 1981 the transformer partnerships appeared to have run out of steam, fuelled by controversy, budgetary constraints and internal power struggles. Miles admitted that the security found in a government post was not conducive to sustained creativity. In 1989 Margaret Thatcher's Conservative government brought in admission charges and funds were diverted away from exhibitions. A raft of redundancies followed which included the majority of the designer/scientist transformation partnerships who had formed the backbone of NES.

Transformation shaped new ways of producing educational exhibits at the NHM, but its effects are more far reaching, Ideas that were thought radical during the 1970s (as they were in the 1920s) now appear logical and commonplace to today's museum designers,

When NES ended in 1991 all new major permanent exhibitions were competitively out-sourced, some going to design groups whose staff included ex NHM transformers who now function as independent designers and interpreters working with museums and visitor attractions worldwide. They admit to taking the Isotype-inspired approach with them.

Interpretation still takes place at the NHM with scientists working with in-house teams of script editors, outside designers and audience advocates who make sure that exhibitions remain visitor-focused.

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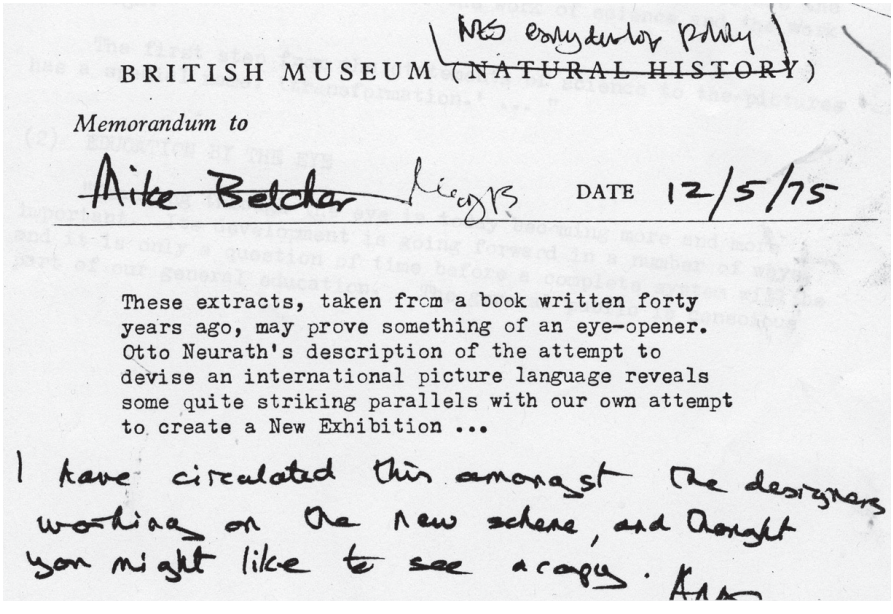


BRITISH MUSEUM (~~NATURAL HISTORY~~) NES exhibition policy

Memorandum to

~~Mike Belcher~~ Meggs DATE 12/5/75

These extracts, taken from a book written forty years ago, may prove something of an eye-opener. Otto Neurath's description of the attempt to devise an international picture language reveals some quite striking parallels with our own attempt to create a New Exhibition ...

I have circulated this amongst the designers working on the new scheme, and thought you might like to see a copy. AM



It´s a semantic world.
Story telling and how to search for gold.

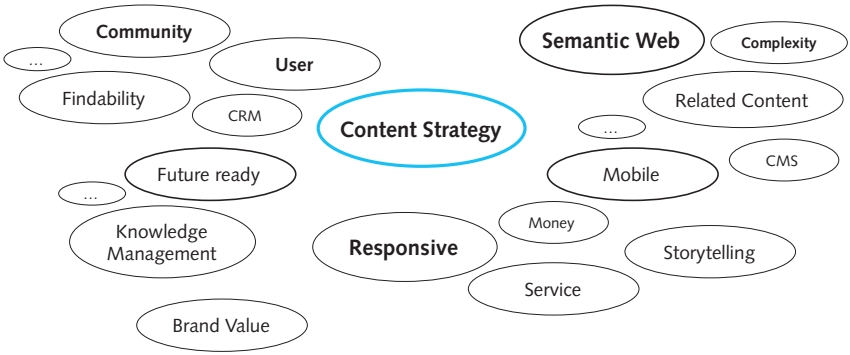
Frank Diana
Designer / Munich - Germany

When we talk about content, we need to talk about relationships and purpose. As designers and consultants, our today's challenge is to provide information on various channels and under conditions we might not even be able to foresee.
How to face this?
Start with understanding the meaning and aim of any piece of information. Try hard to layout its inner structure and provide joyful ways through the identified elements and dimensions – driven by the content itself, not by the device it might be presented on.

This talk will tell something about 2 content strategy projects (one for a global player in telecommunication, one for a mid size company in the housing sector) and about a multi level approach when working in interdisciplinary teams under demanding time constrains and technical restrictions. It will tell about the hope that lives in non-technical solutions as well the pleasure to discover hidden treasures.

Some of the aspects that will be addressed:
- Sharpen focus – given by strategy it helps the user to find it´s way
- Offer context – providing orientation is not restrictive
- Tell the story to be – the oldest information technology we do have, and it is still brilliant.

Areas and some related topics



Expectations differ regarding the filed of Content Strategy – and of what Content Strategy can do or should do. The very simple meaning of the term is given by its two parts: It's about content and about strategy. There are methods directly related to Content Strategy like Storytelling. Lots of IT related topics depend on or can at least benefit from a well done Content Strategy. Content Strategy can be an enabler, e.g. for Responsive and Adaptive Design. Topics like Brand Perception or Customer Experience Management provide valuable input for Content Strategy projects or are part of the processes to be considered within a Content Strategy.



everything **will be solved**

Just to add some aspects of Content Strategy without a big picture turns out as very optimistic view, which seems to be quite common these days.

Listen. Ask questions. ? Understand. Tell stories.

When we talk about content, we need to talk about relationships and purpose. As designers and consultants, our today's challenge is to provide information on various channels and under conditions we might not even be able to foresee.
How to face this? Start with understanding the meaning and aim of any piece of information. Try hard to layout its inner structure and provide joyful ways through the identified elements and dimensions – driven by the content itself, not by the device it might be presented on.

Who is asking for Content Strategy

There are many upcoming topics, sometimes pain points, that can result in the idea of having a Content Strategy project. Most likely Content Strategy projects come along with an other project or initiative within the company.

„We have a CMS – so we need an asset model."

„We need to go mobile"

„We have too many outdated content."

„People use the wrong search terms."



„We need to know our processes."

„We need to know our audience better."

„Would be great to know what we know."

„How can we provide better services?"

In the role of a Content Strategist you might face a multi level approach when working in interdisciplinary teams, sometimes under demanding time constrains and technical restrictions. So not to forget there is a lot of hope that lives in non-technical solutions. If you are lucky and you keep asking the right questions and listen carefully, there is the pleasure to discover hidden treasures, finding stories you can tell, providing great value for your users that do not depend on the technical part but on understanding of benefit driven Storytelling.
You can help to optimize processes, to identify potential for improvements and to replace assumptions with user insights to learn more and more about your audience with all their needs, demands and preferences.
So some of your main tasks will be

- **Sharpen focus** – given by strategy it helps the user to find it´s way through the provided content.
- **Offer context** – providing orientation is not restrictive. Making the context personalized and situation based will be one of the challenges of Content Strategy.
- **Tell the story to be** – the oldest information technology we do have, and it is still brilliant.

The Principle of Structured Content addresses the need to create future ready content and to learn and tell about the semantics of this content. The term „COPE" (**C**reate **O**nce **P**ublish **E**verywhere) is often used while talking about Structured Content. But why is Structured Content so keen for Content Strategy? There are 2 ways to keep up with your content: You can do more with your content or you can enable your content to be more powerful. Structured Content helps you to

- Keep up with new devices and channels while optimizing CMS processes.
- Maintain content and to get rid of outdated content, installing a content workflow.
- Create „better" content while focusing on quality content while using half automated processes to do the basics.
- Meet user needs while learning about the usage of the content and what your audience is looking for.

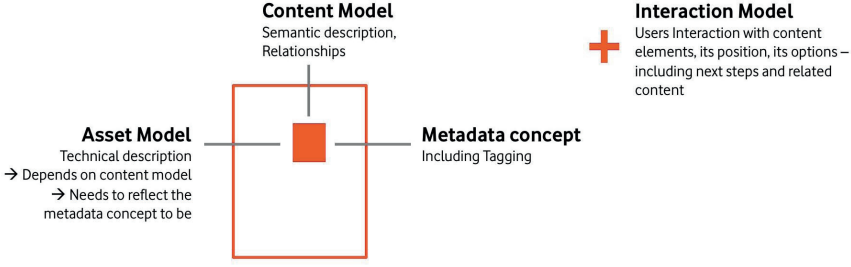
Project 01

Task
Doing a Content Model for a CMS (Content Management System) project for a global player in telecommunication.
Scope: Starting with about 2000 static pages.
The Content Model needs to be able to work as a blueprint for the whole website (DE as pilot followed by the Company Group).

Challenge
Content Strategy was no topic in this company before.
The chosen CMS highly depends on a very detail Asset Model.
And the implementation of the CMS modules started already.

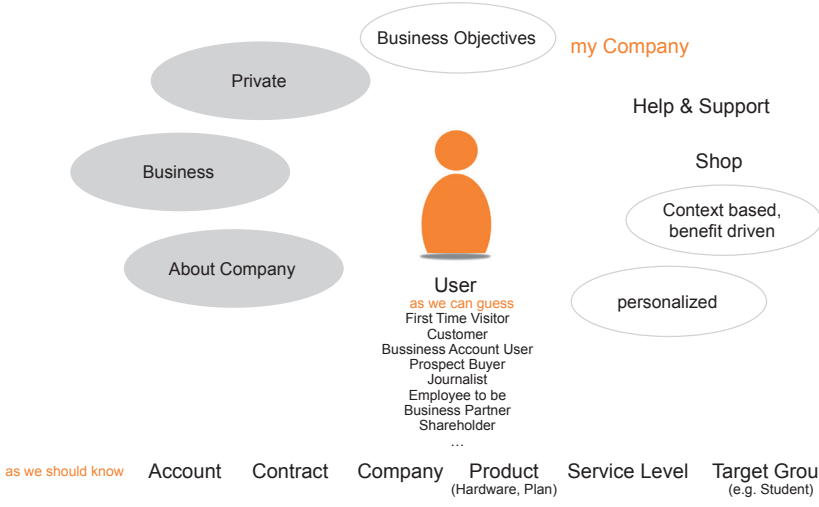
No Model that describes it all

→ One Element will depend on different models that belong to different concepts to be

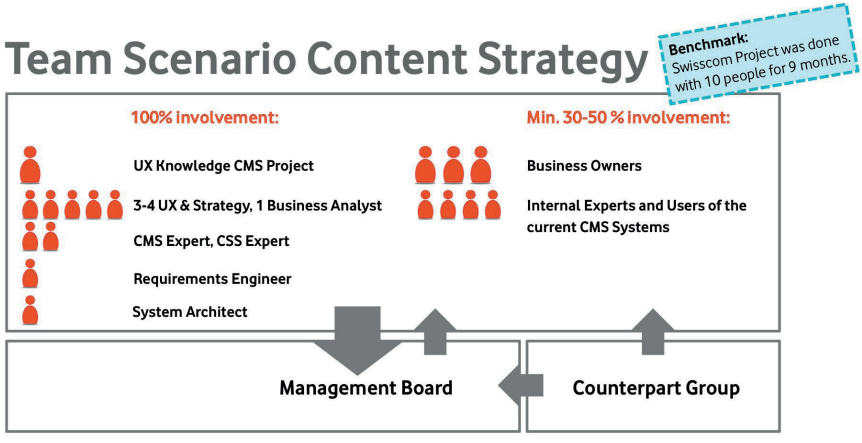


What happened
Critical was to gain a common understanding of a Content Model and to manage the expectations of what will be useful to support the project under the given time pressure.
Due to the topic was very strategic and content driven but the project itself was a highly operational one and tech driven, we decided to split up the work into 3 parts. One was to draw a Big Picture and the scope to be on a mid to long term perspective. Next was to support the UX team with the findings that came along with the Content Review for the Content Model. The last part was to support the editors with an understanding of the upcoming demands of Responsive Design as well as Structured Content in general and to clarify together with the team what could be the first elements to introduce the principles of Structured Content also for the content re-write process and other upcoming projects.

Big Picture and how to set up the team



To consider the aspects in the Big Picture above is both, hard work for the team and a challenge in communication to involve all relevant stakeholder. To show who is needed for and who should be part of the project, we used the following team scenario.



But how to get Structured Content?

- Doing the basics: Content Review, analysis, identifying the semantic elements
- Gain understanding: see the relationships, what is most important for the business?
- How to keep focus with user needs, how to order elements by relevance?
- Is there an any synergy within departments to create a content just once?
- How much structure can be handled by the editors? – Adjust after reality check!
- Are there next to the content workflow processes that need to be installed or optimized?

Storytelling and a simple sample

One of the main principles described in Content Everywhere (Sara Wachter-Boettcher. 2012) is to care about the meaning and relationships of content elements, to aim for relevance for the audience, not for control e.g. of the layout of a special channel that will use or display this content.

Due to time reasons it was not possible to learn about our audience while doing interviews, user tests or further research. So we tried to bring up the inherent knowledge of the team, in this case the team of editors. They knew a lot about the content itself but not yet much about the options coming with the new CMS.
And even when the CMS implementation was not yet ready for some kinds of Structured Content, we aimed to improve the content structure by better Storytelling strategies.

Main task for articles pages (static content)

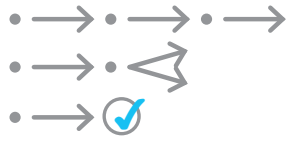
is to inform

This is how they can fulfill this task

in steps

work as a hub

enable to act



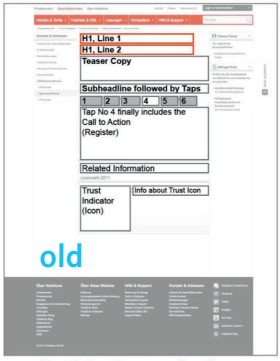
or

inspire



The following sample tells how not to use hidden content (tabs) but to show clearly what the user is able to do (call to action, CTA) and if there are other related topics that might be interesting (related content, next best option). It was introduced to the editors to illustrate the principles of Structured Content and Interaction Patterns.

To show the difference: article with process steps to be.





- No hidden content
- I can see what it is about and what I can do here
- Less clicks (5)
- CTA is clear & visible

- 5 clicks to see it all
- Hidden Call to Action (CTA)

Project 02

Task
Doing a Content Model for an international relaunch project including the blueprint for 4 markets and the integration of 2 brands into the group.
Workshops with the stakeholders of all markets. Content Strategy and Storytelling for the first 2 countries.

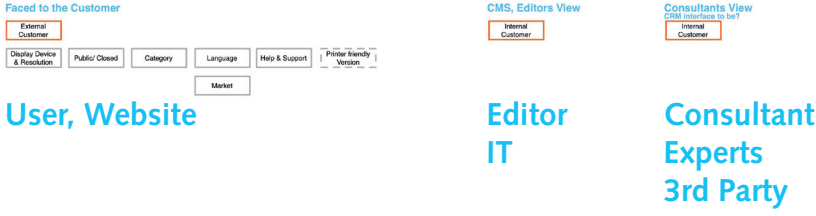


Challenge
Finding a doable solution to tell the story about a complex IT product and the offered services. Learning about the strength of each of the markets and what they do have in common.

What happened
There was already a very customer friendly, personal communication style since years that never was mentioned to be a core value of the company. We discovered that they did very well regarding their customer relationship and used this finding and made it transparent on the website.
For the CMS setup we introduced 2 levels of so called internal customers within the system to support the editors and to involve all consultants to improve the content and to update their own profiles. Content Clusters, organized by a Meta Story, built the basis for further refinements of all content elements and their relationships.
The knowledge about this relationships allowed to build a content ecosystem with meaningful connections and related topics. Content areas were defined that are vivid in the sense of half-automated content creation and maintenance.

Looking at the semantic elements

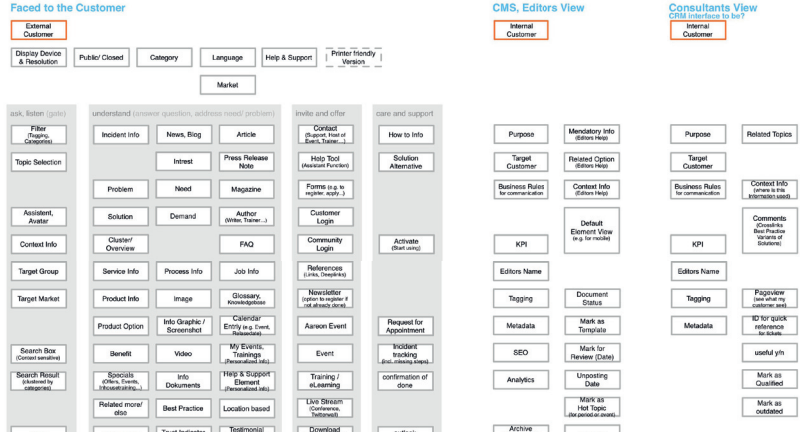
1. Who is our customer?



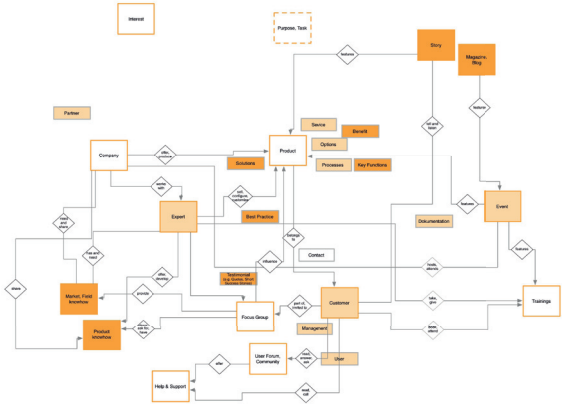
2. What we do have to consider?



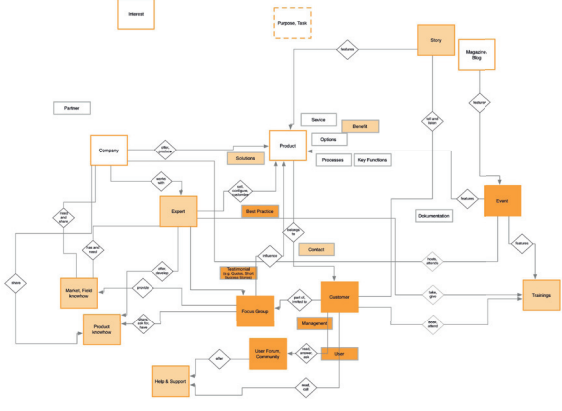
3. What are the content elements and their functions?



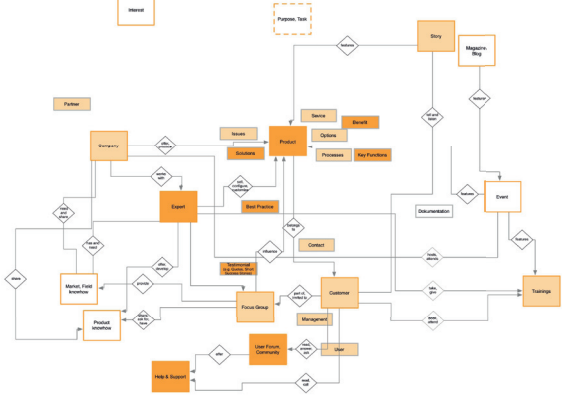
Content Model with different view ports



Story driven



People driven



Product centric

Learnings

About Structured Content and Content Models
We need to talk about semantics and relationships
01:
Quite a lot of people just talk about buzzwords or the technical aspects of Content Strategy.

Project 01: Content Model, basic
A Content Model is NO Asset Model.
02:
A simple Content Model is much better then no Content Model.
03:
Cluster and Meta Stories are a good start.
04:
Think about external and internal user as well as about your stakeholders.

Project 02: Content Model, next level
Which story should we tell?
05:
Use group dynamics to force decision making.
06:
If nobody is able to explain it to you in detail, it is maybe not the right story to tell it to your audience.
07:
Value what you already have. Sometimes the golden nuggets are well hidden, sometimes they are so obvious to the people involved that they are just overlooked.

Why using a Content Model?
… because it is not too bad.
Learning 08:
A Content Model is not the truth, but it can become a backbone for your content project.
Learning 09:
Content Models are continuing communication tools helping you to handle complexity and to keep focus.
Learning 10:
Content Strategy is not done when you have a Content Model.

For questions related to the topics mentioned in this article, please do not hesitate to contact me via email info@dianafrank.de or twitter @ffm_ux.

Recommended Books about Content Strategy:
Sara Wachter-Boettcher. Content Everywhere, 2012.
Kristina Halvorson, Melissa Rach. Content Strategy for the Web, 2nd Edition, 2012.



Business Information Design - helping to understand business

Griesfelder Roman
aspektum / St. Gallen - Switzerland

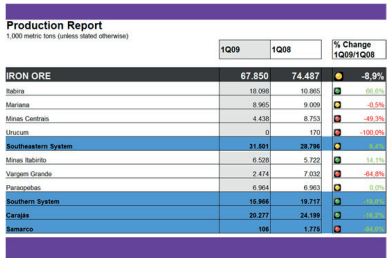
BUSINESS INFORMATION DESIGN is defining standards for presenting business data in charts and tables. Everyday organizations are struggling with arbitrary and confusing visualitations that rely only on the personal taste of employees and on the functionality of Microsoft Office software. The „data driven company" has turned into the „data confused company". Until now methods for visualizing quantitative business data have not been established, tools are still inadequate and people do not get trained at all. The results are unstructered data graveyards, funny comic style charts and presentations without meaning and messages. This is a global phenomenon. With the introduction of Excel and PowerPoint in offices all over the world, employees turned into self-made information designers - whether they like it or not. BUSINESS INFORMATION DESIGN is not trying to turn back time, but is introducing simple and effective rules for easy to read tables and understandable charts. For professional designers those rules might appear self-evident, but for millions of professional business people BUSINESS INFORMATION DESIGN could be the missing link for efficient and effective business communication. BUSINESS INFORMATION DESIGN is information design put into daily action. It helps to transform data into information and information into knowledge. It changes the way business professionals use visualizations and it even changes the way business people think about problems and solutions.

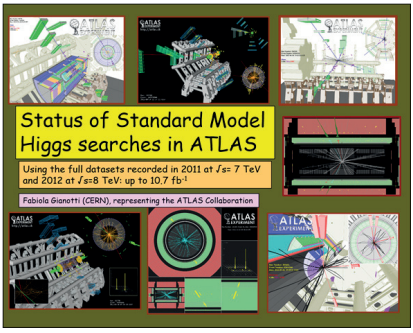
The basic principles of good design are not part of everyday business communication. The visualization of business related and public data is stuck in a comic-stylish but design-free status. It is nourished by three factors:

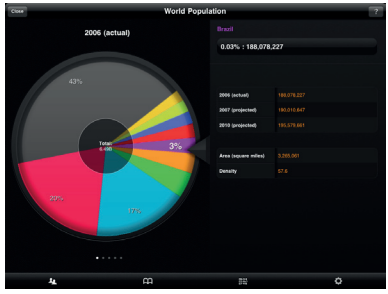
- A lack of clear and precise thinking, which leads to bewildering structures and a childlike PowerPoint language. Business Communication is taken hostage by marketing.
- A lack of consistent education in data analysis, information design and communication skills.
- A lack of appropriate tools.

We care too much about packaging and not enough about content.









Business Communication is about decisions. They often imply consequences for people and should be conducted in a most serious way. The same applies for public issues which are discussed and communicated by the media and politicians. Entertainment will not solve any problems in business and public life but knowledge and the development of opinion will.

BUSINESS INFORMATION DESIGN describes the basic guidelines for effective business communication with visual objects (charts, tables, graphs). It is inevitable for understanding business and public life and should be part of every sophisticated professional and general education.

SUE – A BASIC CONCEPT FOR BUSINESS INFORMATION DESIGN

Without the attitude of honesty communication cannot succeed in whatever form. Without confidence in the truth of the information presented the main basis for communication is compromised. The sender of information (the author, the designer, the speaker) is responsible for creating confidence in his motifs and results.

What is quite normal today in advertising should have no place in communication for steering business or informing the public: facts should not be distorted. A distortion takes place through filtering (the leaving off of relevant components of information), through manipulation (a conscious disproportionate use of information), camouflage (the replacement of information by decoration) and lie (the use and claim of false facts)

The basics of professional business communication can be summarized by the SUE Modell. It leads to efficient and effective communication.

Simple

The more complex an issue and the more serious a decision is the more important it is to recognize the essentials quickly and clearly. The use of simple display helps. Decoration leads to a difficult process of perception.

Uniform

Without rules for the representation of information life in today's society is unthinkable. If these rules do not exist and if codifications are unclear, the effort for detecting and understanding of information increases dramatically. Often we give up, hide, skip and hope that it will not cause serious consequences.

Explicit

The presentation of information must help the recipient to judge a situation as clearly as possible.

• Necessity: Is the information necessary? This question touches on the basis of business communication. Many managers are faced with information that is not relevant to their function. To provide as much information as possible to management, shows that the senders have not yet understood the questions of the receiver sufficiently. If we do not know our audience, we will not be able to communicate effectively.

• Comparability: Information will be well understood, if it can be compared with other information. This comparison leads to a classification, which is ultimately the foundation for understanding. Charts are based on precisely this principle. They provide a visual comparison of measured variables. Comparisons are possible if many measured variables and thus a high density of information is presented. Missing data, manipulated References (scaling) and poorly readable representations prevent comparability.

• Structure: Structure is the logically correct and meaningful arrangement of information. Important questions are: What belongs together? Which issue depends on which other issues? A good structure helps the recipient to answer these questions.

USE, DON'T ABUSE THE POWER OF COLOUR

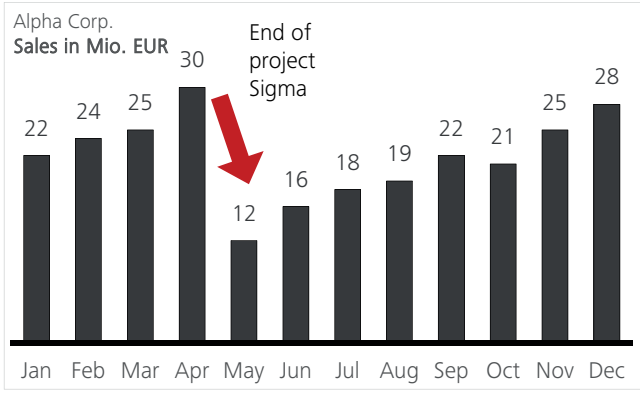
The use of colour in business communication should follow clear rules.

Sales in the western region is declining by 4% because of a new competitor.

This text is hard to read and every serious person would never accept such kind of inferior design. On the other hand many professional business people accept visual objects which use colours excessively and without meaning.



A cautios use of color leads to a clean appearance and helps to identify important components in the chart.

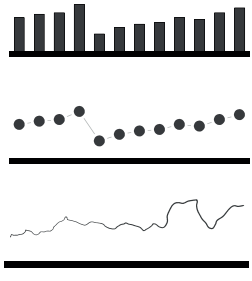


The following colours can be used as standard colours in charts, tables and graphs:

Colour	Example	Appliance
black		For text and selected visual elements
grey dark		To distinguish data types
grey middle		To distinguish data types
grey light		To distinguish data types
red		Inferior compared to a reference
green		Superior compared to a reference
blue		For general Highlighting

STAY IN FORM - DELIVER MEANING

The usage of complex and bulky elements leads to distraction. Therefore 3D and other visual effects should not be part of serious business communication. Different shapes can help to distinguish facts. Form is a powerful way of delivering meaning.



forms
use forms to distinguish measure types

absolute measures

relative measures

absolute and relative measures for high data density

STANDARDISED SIGNS IMPROVE UNDERSTANDING

signs
use standardized signs, define numbers and nomenclature

signs

Δ Ø / % ‰ .. Σ

numbers

basic	25.698 EUR	18,3 %	12,8 %p
variance	+3.964 EUR	+9,5 %	+4,3 %p
	−8.023 EUR	−8,2 %	−0,9 %p

nomenclature

PY, ACT, BUD, FC, PL

Signs, numbers and a professional nomenclature are essential for successful business communication. We spend years in school to learn the meaning of letters and numbers. They are the basis of communication in modern societies. It is equally important to establish a standardised usage of signs in business communication.

INFORMATION DENSITY: UNDERSTAND MORE BY SEEING MORE

In everyday life we deal with a large number of information. High information density is necessary in order to classify individual information correctly. It increases our ability to estimate measures and consequences.

Children usually are confronted with low information density only. They will acquire the skills for processing high information density over many years of learning.

In business communication these skills are underused. Reports, Management cockpits and presentations often show a lack of information.

Illustration in the New York Times



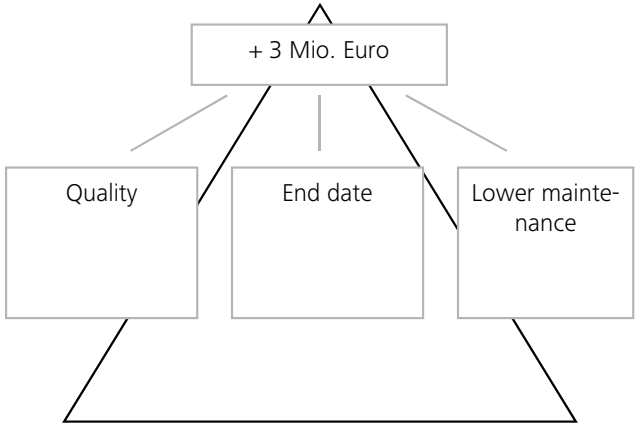
Illustration of a childrens book

A GOOD STRUCTURE IS THE KEY FOR (ALMOST) EVERYTHING

Structure is the meaningful order of facts which are related to each other. Without this order, the understanding of relationships and effects is hardly possible. Disorder leads to a lack of understanding.

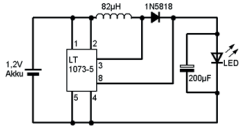
Each classification system has a hierarchy. There are always topics which stand logically above other issues and describe these subordinate facts accurately. A common image for this order is the pyramid or triangle. Clearly understandable structures are arranged hierarchically (like a pyramid or a triangle). You have a unique "top" and a clear "bottom".

Suppose we want to explain that project Sigma needs another 3 million euros. This core message is named in an easily understandable structure at the top (or at the very beginning). Below it are the necessary arguments. These arguments are in good structures alike (they match the core message), zero overlap (they each deal with clearly distinguishable topics: they do not overlap) and they are completely in accordance with the core message (there are no substantial comments missing).



NOTATION SHOULD BE PART OF ANY SERIOUS PROFESSION

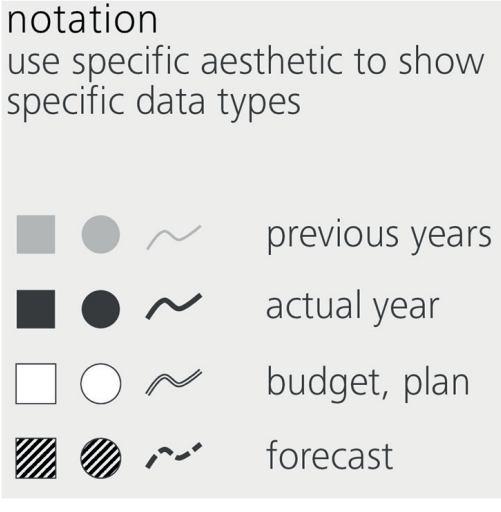
Engineers did it, mapmakers did it, even musicians did it – they developed a consistent concept of meaning for visual elements.







A notation is the basis of a common visual language that helps to communicate complex issues in an understandable and feasible way. But nowadays business and public topics are shown in an arbitrary and therefore nonprofessional way. It is time to agree on a basic notation to understand business more efficiently and effectively.

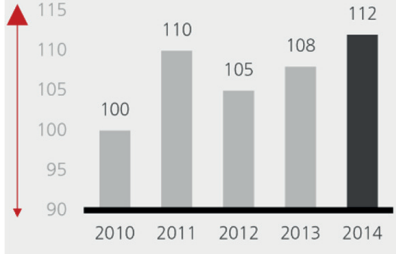


SCALING IS A MATTER OF TRUST

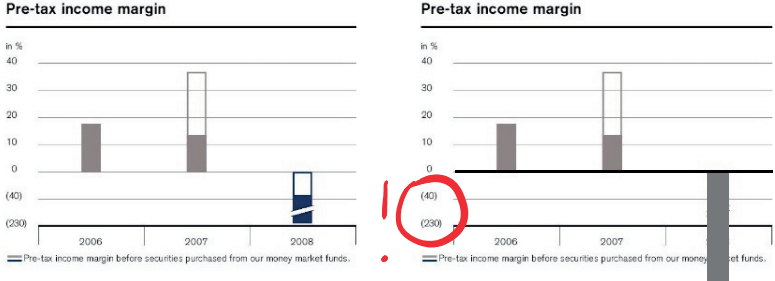
Charts are powerful visual tools for making business and public issues visible. What probably takes minutes to find in a table or text, charts can convey in seconds. Pattern and trends show relationships and developments.

But visualizations can be deceiving. Wrong scaling leads to wrong impressions and a wrong first impression always is hard to ignore. If you can`t trust the chart, you can`t trust the numbers. If you can`t trust the numbers, why should you trust the author?

scaling
never use nonlinear, distorted or manipulated scaling
WYSIWII = „What You See Is What It Is“



If scaling is a matter of trust, we always have to use correct scaling no matter how painful it is.



Scaling issue in the 2008 annual report of a global bank.
Original on the left, correct scaling on the right side. (Ouch!)

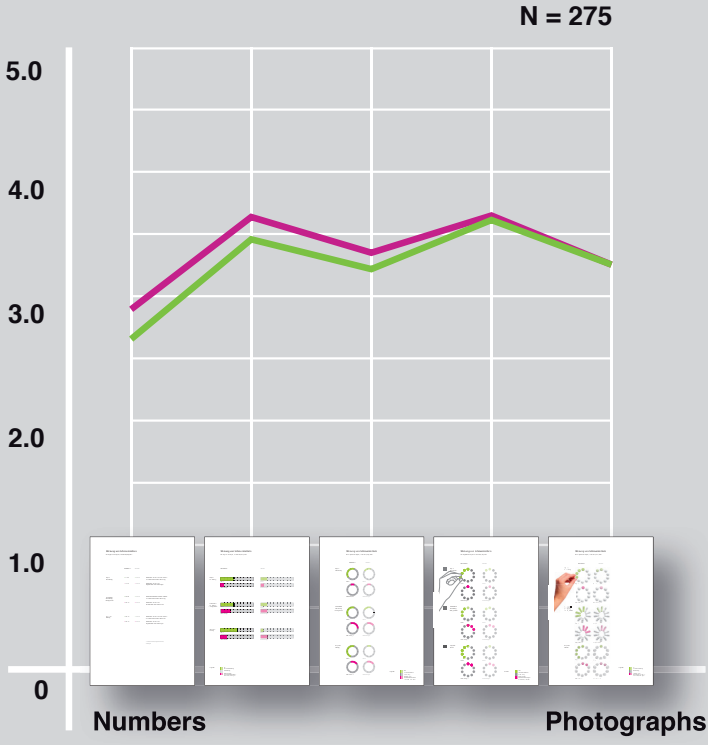


Let´s Transform!

Skopec David
University of Arts Berlin - Germany

Booming, fascinating, omnipresent - so simple can be summarized how information graphics have developed in recent years. One might think that we are to reach the great demands in visual communications: guidance and enlightenment. But is that correct? Make us more and more information graphics also more and more wise people? Or are contemporary information graphics just a misunderstanding of the idea of ISOTYPE - and their fundamental concept of Transformation?
In my presentation I would like to address this question by discussing two essential criteria in visual communication: effect and effectiveness –
and I would like to share some ideas on how we approach Transformation in the context of design education today.

Attractiveness

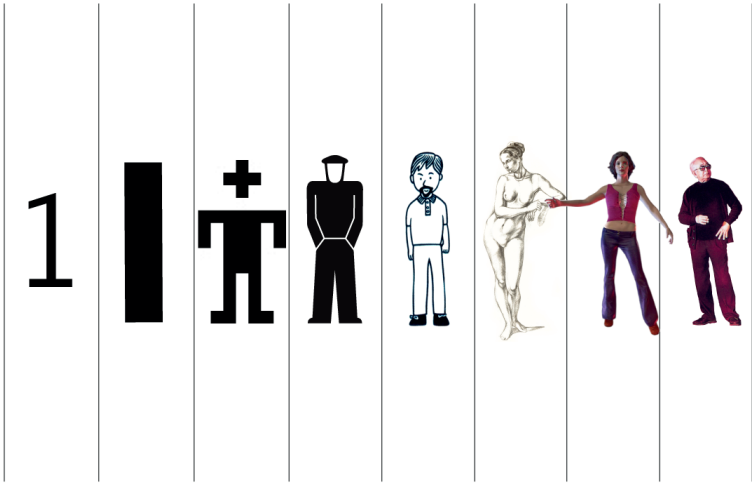


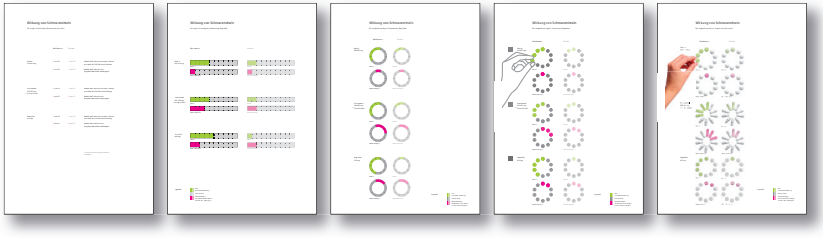
High graph literacy

Low graph literacy

EBI

Levels of Iconicity





EBI: Summary

No general formula

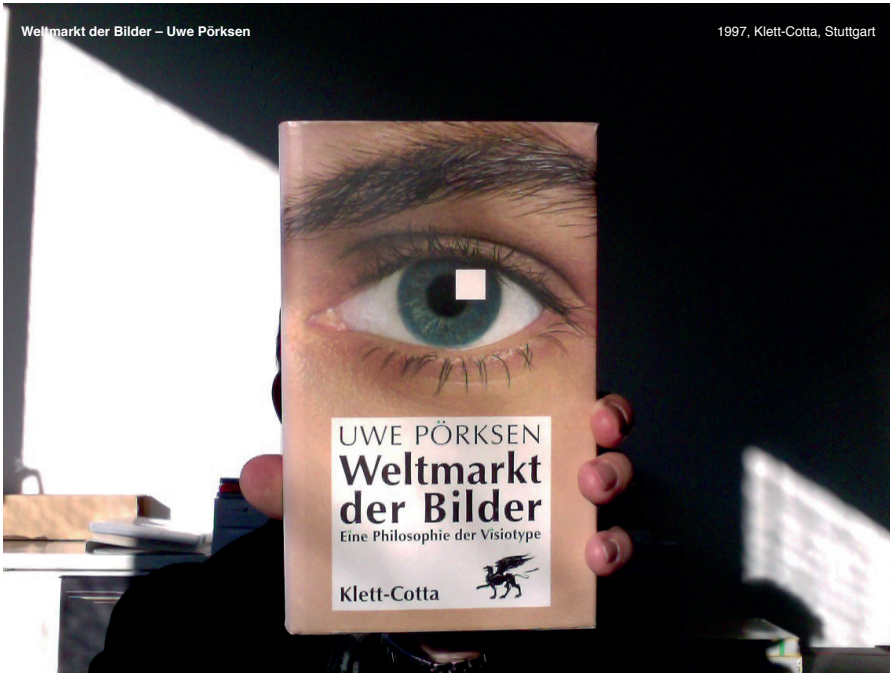
Effectiveness depends largely on the recipients

Pictures vs. Numbers

No general advantage of the images compared with the numbers

Picture statistic vs. abstract diagram

Higher Iconicity ≠ better understanding



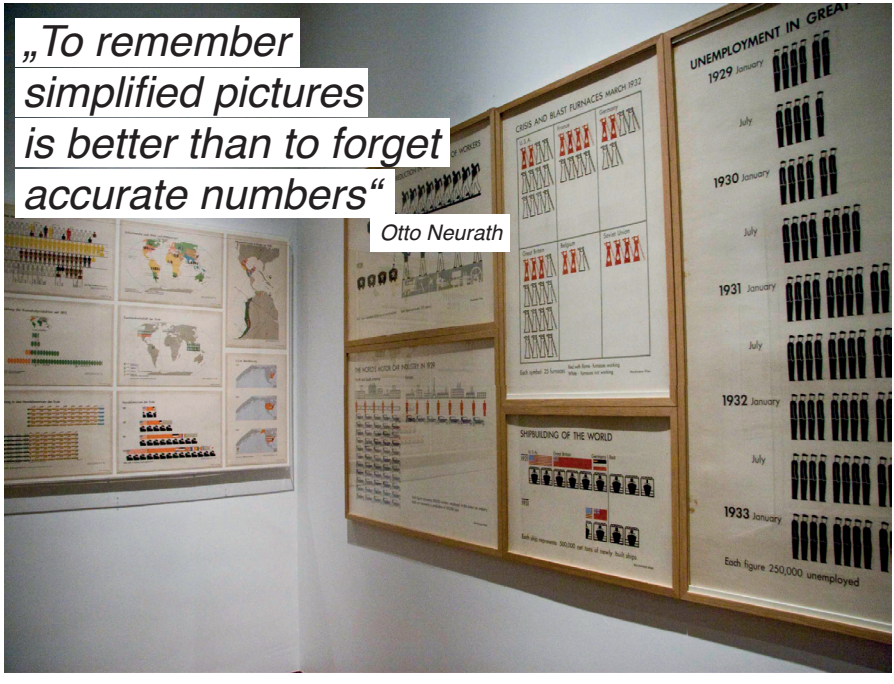
"Modern man is very spoiled by cinema and Illustrations.

Much of his education he receives in the most pleasant way, partly during his rest breaks, by visual impressions.

If you want to distribute social education in general, one has to use similar ways of representation.

The modern advertising poster shows us the way! "

Otto Neurath
in Österreichische Gemeinde-Zeitung, 1925



„An image is revealed by its shape.
A sentence understood because of its meaning.
These are two ways of understanding.“

Uwe Pörksen, 1997

„The Nimbus dominates
the Message“

Pictorialization:

Abstract images sometimes lead us to abstract meanings

Impressive Visual Complexity:

Apodictic authority sometimes misleads to nonsense

„At any rate, we must also show,
how the world really is“

Five Ideas for ‚Vivid Transformation'

Analytical and experimental

Consequent immersion

Change the vocabularies

Understand communication

City & Society

SANDNER Günther

STUDZINSKA Malwina & JANCZUKOWICZ-CICHOSZ Ewa

ZIMMERMANN Nicole & ZIFKO Matthias

DE HASETH Joshua



Otto´s political biography and Marie

Sandner Günther
University of Vienna - Austria

Extracts and (much more) comments on Otto and Marie
based on his recently published book: Otto Neurath „Eine politische Biographie“



Marie
Reidemeister
(early 1920s)



Otto Neurath and Vienna‘s Mayor Karl Seitz (1931)



Otto Neurath und Marie Reidemeister
(Summer 1933)

26th Nov. 1948

Dear Dora, we just leave for a weekend lecture tour, we shall return on Monday .THerefore I write you a few lines. Today we talked over Vienna dishes and meal customs . I think one can say, that the food was heavy, carbonhydrates , APFELSTRUDEL, very fine, but heavy ,too, and all the Knoedel , etc Krautfleckerln as sweet dish as it were. Please, tell me, whether during your life time something has been changed .

Would it be right to say, that some people (who ?) had in the morning a KAFFEE with SEMMEL or KIPFERL, with nothing more, or butter ? no marmelade. about 7½ or so , GABELFRUEHSTUECK, when ? 10,30 ? Who ? GOULASCH, WUERSTEL, etc, in the offices not possible warm, therefore only Butterbrot mit einer Schinke . Or what ? Differentiation between classes . MITTAG, about 1 and 1,30, warm. , a Suppe, Rindfleisch mit Einbrennsoss, Gemues, Fuchtein ... What did people do; who wanted to be slim . I think ,some people wanted to be ? Many ? In an increasing number ? More fat women in Vienna ? Sopherl vom Naschmarkt typus . Nazi ? or what now ? What about Nachmittagkaffee, what in offices? What about Kutscher meals ? Evening in Gut buergerlichem Hause, Ronsperger, Lucka etc ?

What about the distribution throughout the year ? What about DELIKATESSEN ? Wurst qualities ? Bread ? What about waschen und baden , Reinlichkeit , 50 years Vienna Reinlichkeit .

How changed the clothes ? When the pyjama came ? I hope you will write a stimulating report and we shall get a good picture of Vienna .

But now I have to prepare something for my lecture, Good bye,we are looking forward to your coming, when ? With kind regards from both of us ever yours



1221/37-21



Gdynia Design for All
Design Entrepreneurship

Studzinska Malwina &
Ewa Janczukowicz-Cichosz
Gdynia Design Centre Gdynia - Poland

The communication aspect of 2 projects realised by Gdynia Design Centre will be shown in the context of communicating across different disciplines, cultures and age groups. Project 1: "Gdynia Design for All" showing communication with the elderly regarding their needs as for public space design.

Design EntrepreneurSHIP - Integration of students, graduates and SMEs in terms of industrial design management" showing the skills of a good design manager who has to create synergy between inter-disciplinary participants from different countries (Polish, German and Swedish participants, graduates of design, business and technology) in order to realise the company brief and meet the expectations.

Gdynia, 11th September 2014

Authors: Ewa Janczukowicz-Cichosz, Malwina Studzińska – Gdynia Design Centre

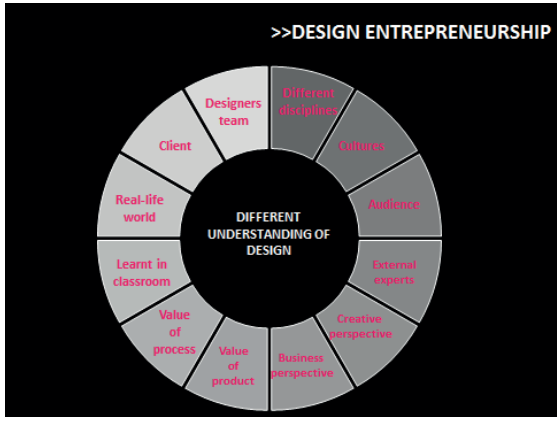
With the main objective of the conference being: "*to bring together professionals who represent modern day transformers – those who translate data into facts that their audience can understand*", Gdynia Design Centre representatives, Ewa Janczukowicz-Cichosz and Malwina Studzińska, aimed to present their definition of what makes a project visionary. The task was a challenge, however, as their daily work at the Pomeranian Science and Technology Park brings them close to innovations, the speakers have come across multiple ways to approach a problem so its results bring new, valuable input instead of repeating the traditional, well-worn solutions. This could seem as a valuable background on how to run projects so the products and services which come out as a result are visionary at least to some extent. Nevertheless, the awareness of the problems complexity make it much more difficult. Facing a new problem, for instance, no matter how experienced we are, will not mean that we will find one exact model which should be realised step by step. Years of observing how innovations are made have shown that three core points have to be taken into account. These are *flexibility, openness* and *minding the user needs* – this, in the view of Gdynia Design Centre representatives, was the key to success in every project they have run. When you add another two keywords - *communication* and *cooperation* - which relate to the people responsible for the process and the relations among them, then we are getting closer and closer to a recipe for getting on to the innovation path. Due to their strengths and a certain need of omnipresence in all steps of the project, they will basically form the contents of the two examples of activities run by Gdynia Design Centre. Hopefully, the presence of *communication* and *cooperation* keywords along their stages will serve as a good practice example. Nevertheless, one thing is sure – the examples will show that the application of *communication* and *cooperation* definitely brings a hint of "transformers" features to the final results.

Project 1: "*Design EntrepreneurSHIP - Integration of students, graduates and SMEs in terms of industrial design management*"

The main goal of the project was integration of design sector with business environment by joint elaboration of solutions for everyday issues in the field of industrial design management, including such aspects as: project design, implementation into production, budgeting, and entry to market strategy including sales and promotion. In the course of the project, 10 workshops were conducted by recognised European experts in design management. All this took place in international, multidisciplinary teams, accompanied by a variety of external influences, sometimes acting as support, sometimes as an obstacle but in both cases helping to create a reflection upon what was actually done. This sort of " catching distance" acted as a mirror of the reality and definitely helped visualise the effect that the new idea would have – innovative or not visionary at all. It was possible due to the presence of 12 different factors, ranging from the end user through varied perspectives on the same task, up to cultural or educational conditioning. Among them there could be observed as many as 8 types of communication which lead to the synergy of different views. In order to solve a given task, a design manager of the whole process had to coordinate links between different layers. Sand it was this mixture that brought the "fruit" of the process, that is, an innovative result and out-of the box solution. The 8 different levels of communication which occurred in the training session were as follows:

1. Between the client and designers' team
2. Collaboration between different disciplines eg. designers vs. engineer
3. Communication between different cultures
4. The open audience and the workshop going on alongside
5. Between hired external experts with different understanding of design

6. Creative and business perspective of business
7. Design as a Value of a product vs. Design as a process
8. Theory learnt in the classroom vs. Practice from the real-life world



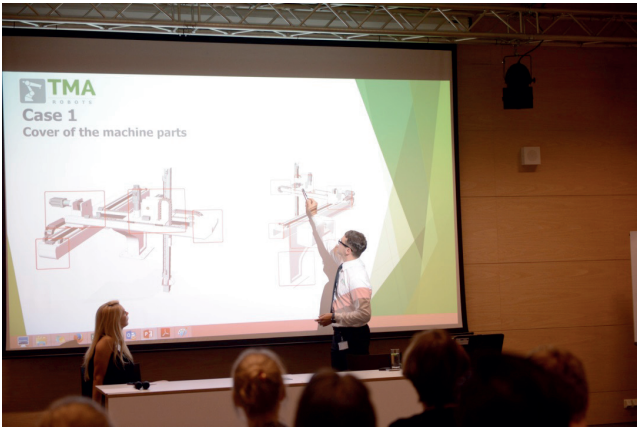
Picture 1: Different understanding of design in design management process – communication between different factors.

The 8 different levels of communication virtually **built the result** of the training session. They occurred whilst the participating groups were solving the case studies of a Polish company, TMA, specialising in design and construction of modern and interdisciplinary solutions in robotics, automatics and mechanics. The task was to design a cover which would enclose the machine parts of the Carthesian robot. The shields had to fulfill the following functions:

- mask the electrical and mechanical elements
- protect against accidental damages
- be decorative - give a modern image
- be adapted to the needs of the machine operator

A team of 6 graduates from different countries and disciplines, with only 1 out of 6 having an engineering background, approached the task based on the implementation of design-thinking methodology. Creative brainstorming did not come that easily – the fear of lack of knowledge on the complicated structure of the robot was a huge obstacle. Nevertheless, there was still a lot of potential to be implemented. Some ideas from designers', eg. tke knowledge of the materials was highly valuable. At the same time, the engineer helped them verify if their vision of the product looks and function had the technical features to fulfill the criteria of a production line such as protection of the operator. On the other hand, the existing project of the cover developed by a team of in-house engineers did not have positive influence on the sales figures. Consequently, collaboration of two opposing teams was necessary and without the synergy of knowledge from both domains, there would be no chance to succeed or the result of each prepared individually would be poor. Hence the introduction to the thread was that the 8 different levels of communication between 12 different factors occurring during the training sessions actually **built the final result**.
Another issue were the client expectations. Some solutions seemed unacceptable and it was the role of a design team to convince the company engineer that their ideas can work. The company representatives also could not accept some facts – why need a brand strategy if you only care about a simple design cover? It was the role of the team of participants to communicate that the project will not be valuable if it is limited to the aesthetics. A design process is something that the company has to go through in order to work on its strengths and weaknesses so its core values are explored and

then taken out to form a cohesive brand. Then it should be confronted with the company mission and future goals so precise values are named. It is the company culture which should be studied on the way, as well as each of its products, past initiatives or even such details as the policy of work atmosphere or office space. Only then could a strategy be formed which will bring ideas for the development of the look of a new robot cover.



Picture 2: Grand Showcase Model Design Implementation – the finale of Design EntrepreneurSHIP project during which multicultural, interdisciplinary teams from Poland, Germany and Sweden solved the case studies of a Polish company, TMA. The photo shows the Vice President of the company, Piotr Orlikowski, explaining his expectations toward the design teams.

Project 2: "*Gdynia Design for All*" showing communication with the elderly regarding their needs as for public space design

The project started in 2011 as part of an initiative "Gdynia Dialogue" aiming at the inclusion of the city inhabitants in the creation of the city together with the city council units. The essence was the practice of maintaining a constant dialogue with all sorts of different people, to learn about their patent and latent needs and aspirations, benefit from their experience and build this into creating a more sustainable place of living. This turns the whole system around, unleashing the strength of social innovation that moves from the bottom upwards. It started with a small projects in one of the districts of Gdynia. where students working in a one-year project, run by Gdynia Design Centre on behalf of Pomeranian Science and Technology Park Gdynia and the City Council, set out to build a dialogue with the local inhabitants. At the same time they were learning about the challenges of public planning in a real-life scenario, so as to identify key potential social flash-points.
When it comes to the lessons learned during the project, similarly as in the previous projects presented by Gdynia Design Centre, the first aspect was not to get obsessed with detail (the disease that afflicts our vertically compartmentalised social and economic governance), but to step back and look at the bigger picture: the holistic approach is intrinsically more inclusive and, by observing things from all different angles, it is also more prone to achieve innovation. Then the second step was to write down the needs identified from a serious of interviews with the inhabitants. This has precisely showed that the age group of 65+ is most demanding in terms of adjusting the existing public space. At the beginning, 22 walks with the seniors were organised during which their awareness of the problem and focus were invaluable. Only 35 participants assisted by 12 volunteers guiding the walks have pointed over 245 barriers in the strict city centre of Gdynia. The number was overwhelming due to the fact that this part of the town was newly renovated in the past years and the project was

definitely part of the regulations for adapting the space to disabled. After such result one would not dare to think how many obstacles will be present in the neglected or suburbian areas of the town where the development plan is less detailed, thus allowing the developers for more flexibility.



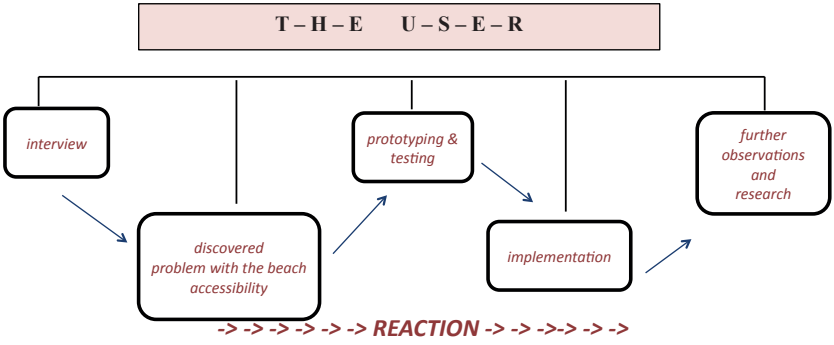
Picture 3: One of the walks organised by Gdynia Design Centre to learn the needs of the sity inhabitants in the public space of the city.

Having learnt that core of actions in public space lies among their users, Gdynia Design Centre have decided to run an innovative initiative directed specially at the seniors. The action was much related to the prevention actions where the volunteers from CAS - Senior Activity Centre, organisation located in Gdynia try to engage the population 65+ in a range of activities so they do not stay home alone, passive, with deficient vitality or life spirit. The activities at CAS cover multiple classes and workshops where the seniors can meet, socialise and spend time but never before did they touch the beach area, even though the city of Gdynia is located at seaside.

Therefore, the latest initiative of Gdynia Design Centre was directed strictly to design a set of tools to make the beach more accessible for seniors and thus to encourage them to use it in summertime. The process has started with organising a meeting with the seniors and conducting an informal interview. A total of 19 questions were prepared to mingle them into the conversation so the seniors do not feel interrogated yet to get a chance to research the needs along the conversation. The first part of the interview had mostly positive answers. For instance, during the last year over 85% of the meeting participants have been to the beach. 58% of them have said they visit the beach regularly, in any weather, even every few days. Visiting there seemed natural, all the more the majority lives in the districts right nearby the coastline. Also, when asked what they take to the beach, the replies were nothing far from the standard beach pack – blanket, drinks and sun cream were the top replies.
As long as this information did not differ from the ones which would probably be accumulated among regular beach visitors of all ages, it has drastically changed when the survey touched the issue of accessibility. A person of a younger age normally ignores the more problematic places, however for the seniors they have turned out to the be serious barriers. 56% have mentioned that they still manage to access everywhere, both to the water line as well to the parts near the dunes, but they find it unsuited and extremely hard. In these circumstances, there was a chance to ask about the remaining 64% of the local 65+ population who does not visit the beach that eagerly. This has started an avalanche of reasons i.e. no toilets, no place to sit down and rest, lack of safety. Several comments were also quite chaotic, showing that the seniors did not really know what makes the access so hard but in general they feel there are several reasons why it's not a perfect location for a relaxing day. The

expert hired to conduct the interview and to assess the data gathered has assumed that the former replies were mostly based on the life-long knowledge of the beach by the citizens living next to it all their lives and being well-accustomed with the topic. The fact that they went there for years with their children makes them feel safe as they know the area well. The queries about the things they usually take with them were therefore quite automatic: blanket, drinks and sun cream. But does the group really spend time on the beach the way that they did throughout the years? Further comments made it more clear. The seniors realised they find it very tiring to enter the beach as they have to go slightly uphill. Besides, they have difficulties to sit on the sand which is on the ground level. Standing up to go to the toilet is even tougher later on, whilst eating lunch on the ground without even a small table is on the verge of impossible. After all this, when they leave the beach they have to lean down to clean the feet and put the shoes on. *A small tap with water access would be a blessing*, they said. All in all, the obstacles reported were all a physical nature, that is, straitened mobility because of the sand itself. None of the meeting participants complained about the heat, running youngsters or loud music.

Given the data collected during the interviews, 5 prototypes of products were developed to make the life of a senior going to the beach easier. They started with a comfortable seat to relax during a walk along the water, through a device helping to clean feet from sand in a comfortable position up to developing a role of a "beach assistant" who is available to give advice or assist when first aid kit is needed (*Pictures 4-7*). The whole process is depicted in *Graph 1* as "Reaction model" which shows the direction that is taken in projects based on social interviews and need coming out of the society. They allow to put the *User* in centre of all steps taken in the project – as an ignition to start a concept and main criterion to develop the ideas, prototype them, test and implement.

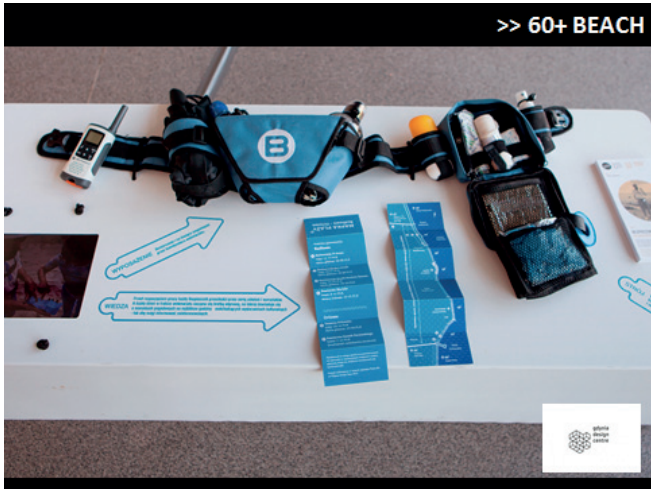


Graph 1. Reaction model used by Gdynia Design Centre in social design projects.

Furthermore, what is crucial about the "60+ beach" project is that it was *communication* and *cooperation* keywords again which led to the formation of new products. The result was not highly innovative but it definitely shared a vision of the future, namely, the aging society in need of assistance where there is less and less people to guide them. This also shows that a vision does not have to be that much of a "transformer". Response to daily human needs can also turn out to bring something new and use the existing knowledge to solve a seemingly banal problem. But the result which comes out of it can turn out highly innovative in its acute yet tender attention to the most basic problem that we face every day.



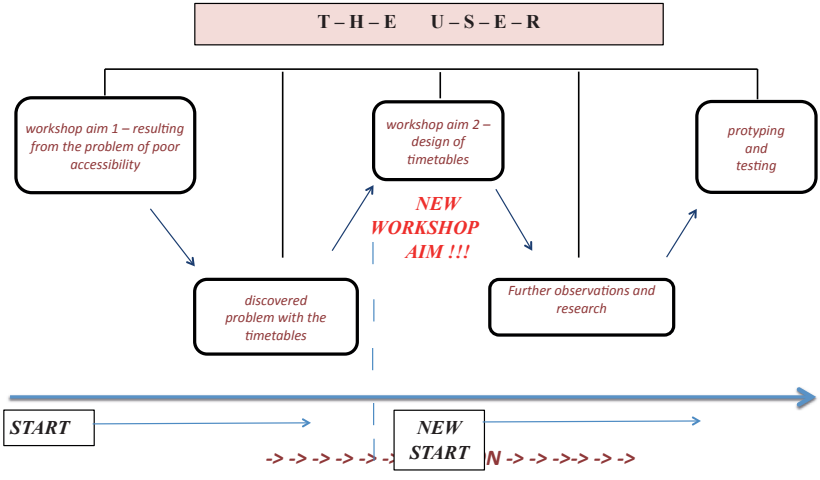
Picture 6: Gdynia Design Days festival – "60+ Beach" exhibition by MALAFOR group. Prototype of a volunteer assistant being at hand to direct or assist with the first aid kit.



Picture 7: Gdynia Design Days festival – "60+ Beach" exhibition by MALAFOR group. Prototype of the equipment of a volunteer assistant being at hand to direct or assist with the first aid kit.

The "Reaction model" was also applied in another project realised by Gdynia Design Centre team focusing on bus stop timetables in the city. It started with several complaints from the senior citizens that the sheets are not legible. This is caused by small print, not well lit board, inconsistent way of data outlay on each stop, no clear information about fares, no reference to the location on town map or inappropriate height of the board i.e. too high for passengers moving on wheel chairs. The first

reply from the City authorities was that investment in the improvement of bus timetables is useless as the news electronic Tristar system is newly introduced and it gives precise info on a number of minutes within which we can expect a certain bus. Nevertheless, the facilities provided by the system proved not to be fully satisfactory for the seniors. They suggested that it does not allow them to check the exact time of bus departure going on the next day. Therefore, they cannot plan a day when they, for instance, have a scheduled doctor appointment on a certain day of the week.
The interview has shown that information coming straight from the users is more valuable than any public poll or research done by the design team or city council unit responsible. It shows the real need in daily use scenario which a person sitting behind a desk and driving a car would never be aware of. Besides, the information collected allowed to adjust the direction of the workshop for the participants. The primary aim was the accessibility and comfort of the bus stop shelter itself. The data from the interviews have re-directed them towards design of timetables. *Graph 2* shows how the design process was amended. Basically, the blue line shows it was repeated from the very beginning which made enormous cost-saving and maintained the potential of being transformative – what would be the point of changing something which is not needed from the very beginning though?


T – H – E U – S – E – R
workshop aim 1 – resulting from the problem of poor accessibility
workshop aim 2 – design of timetables
protyping and testing
NEW WORKSHOP AIM !!!
discovered problem with the timetables
Further observations and research
START
NEW START
-> -> -> -> -> ->
N -> -> ->-> -> ->
N -> -> ->-> -> ->
N -> -> ->-



IC-IC
Enhancing Interconnectivity
through Infoconnectivity

Nicole Zimmermann and Matthias Zifko
Fuenfwerken - Germany / Fluidtime - Austria



Info Connectivity System (ICS): A one-stop-shop that provides passengers with all relevant travel information at the right time, and in the right context and language. The ICS integrates existing travel information from multiple sources — like mobility service providers and airport operators — and enriches the available data where possible. The system allows editors to generate new data and create connections to their own data sources. Apart from their smartphone, passengers will find their personal travel data seamlessly available on all devices: such as airport information systems, ticketing machines and even on-board devices.
The collected information of the Info Connectivity System helps stakeholders and third parties to develop future services to further improve your air travel experience.

ICIC | Enhancing Interconnectivity through Infoconnectivity

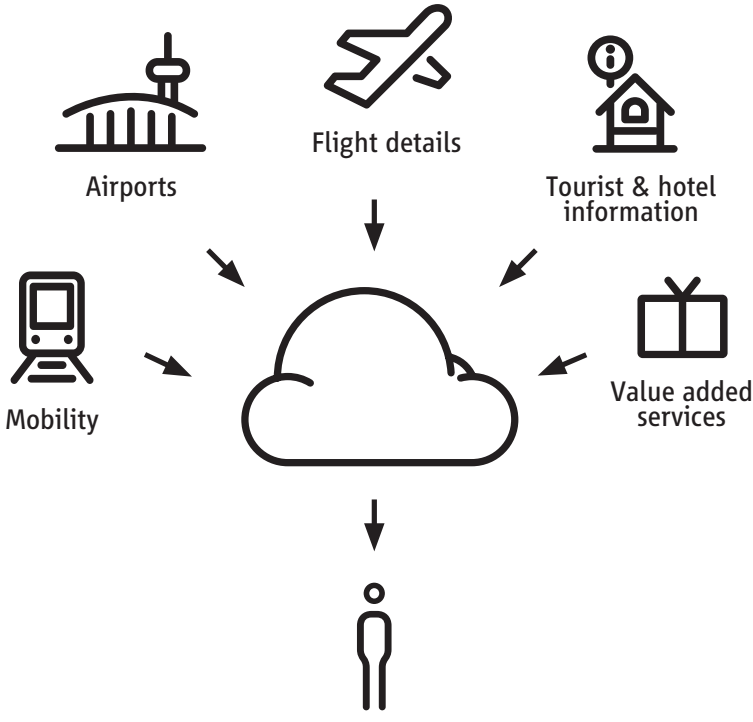
Matthias Zifko Fluidtime
Nicole Zimmermann Fuenfwerken

ICS – Info Connectivity System

Information at european airports is provided in the local language and usually also in English. Our information systems are hostile to visitors who do not speak these two languages. Can Europe afford to disregard all possible visitors (many of them potential tourists) who neither speak English nor the local language?



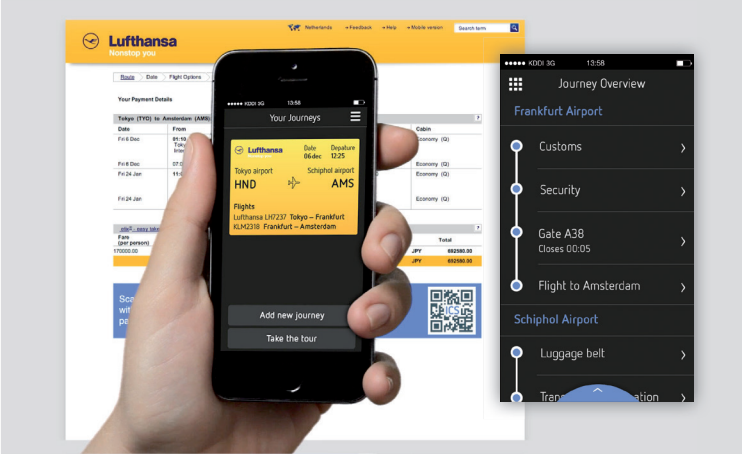
Traveling from and to airports in Europe can be an unpleasant experience. Moreover, passengers are facing issues that occur through different transfer procedures, information deficit and language barriers. Results are a poor travel experience full of stress, unnecessary mistakes, extra effort and expense as well as losing valuable time. The main purpose of ICS is to make travelling to and from Europe less complicated by offering all relevant travel information at right time, in the right context and language.



The ICS is an information system, which integrates existing travel information from multiple sources - like mobility service providers and airport operators - and enriches the available data where possible. A professional information management tool allows editors to generate new data and create connections to new data sources. The aggregated information can be distributed to several channels like mobile devices, airport POIs, on-board screens, hotel room tv, booking sites and printed media. Stakeholders, consortia and third parties can use the information of the ICS to travellers on their journey.

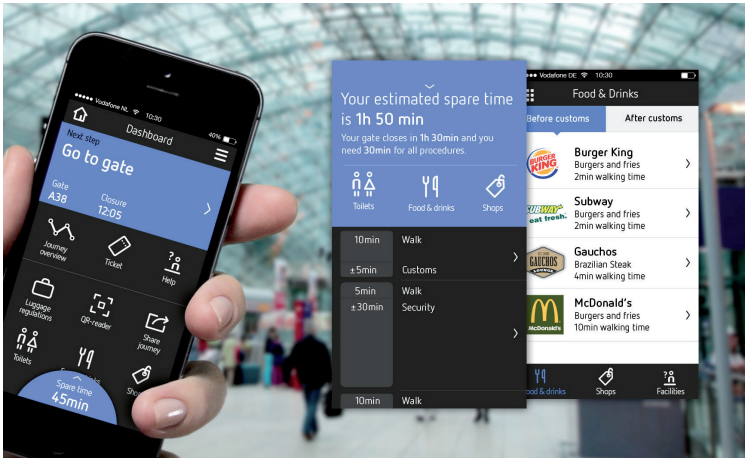
ICS bridges the gap between sources and interface. The system makes raw data accessible for different ICS stakeholders (e.g. content manager of organisations and private companies, independent app developer, media screens at facilities) and enables a multichannel communication and therefore ICS data exchange policies and role management are important for managing real-time access to ICS and the growth of the system.

The following usecases show some of the benefits of using ICS and explain how the travelling experience can be improved:



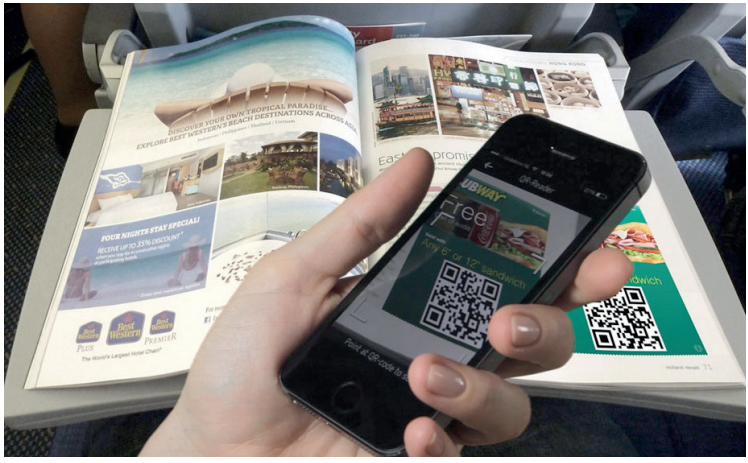
Flight details

All information on the flight can be collected in one tap. The ICS turns the input in single steps displayed in the „Journey Overview“.



Flight details and airport information

Combined information such as on the flight and the airport are used to display the remaining spare time. A link to food and drink facilities such as shops provides the user with possibilities on how to spend his or her time.



Value added Services
ICS Users can collect information and data along the way, offering a way for stakeholders to step into the system by communicating and interacting with the user.

Funding - European Community's Seventh Framework Programme

Project Partners
FH JOANNEUM University of Applied Sciences - Austria
Fluidtime Data Services - Austria
International Institute for Information Design - Austria
Fuenfwerken Design - Germany
Star Engineering - Germany
Attoma sarl - France
Ecole Nationale des Arts Décoratifs - France
Edenspiekermann - Netherlands

ICS release information
Prototypes of an ICS Android App und an ICS Server are already available. Feel free to contact Matthias Zifko (matthias.zifko@fluidtime.com) for further information.

More Information

seamlessairtravel.eu
vimeo.com/96477538

Contacts

Fuenfwerken Design AG
We are experts in design and communication. It is our role to create the appropriate form for messages and information – by combining creativity with solid craftsmanship, knowledge and curiosity.
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Fluidtime Data Services GmbH
Fluidtime is Austria's leading provider of mobility information systems. The software systems transform traffic data and traffic information in the field of public transport and motorized private transport into user-friendly mobility information services.
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More than meets the eye!
Government transformation:

de Haseth Joshua
Province of Flevoland - Netherlands

The Province of Flevoland is a region in dynamic development. As the region evolves, the ways of addressing this by the government changes. With new ideas about how to develop the youngest region in the Netherlands comes a desire and need for clear, accessible and insightful information. Only with the availability of this information the 'New concept of spatial development' can be effective. Without knowing, the projectteam was in need of a transformer.

This talk showcases the policy enhancing tool the 'Omgevingsagenda' (Spatial agenda). The tool was build for the Province of Flevoland and created with Tableau software. The talk will explain the elements shaping this tool and how the visualization works. Furthermore we will get an answer to the all important question 'did the visualization work?'.

And last but not least, this talk shows that the biggest transformation is one that can not be seen. It is more than meets the eye!

More than meets the eye!

Government transformation: the case of province of Flevoland

"transforming information" IIID Vision Plus Conference Sept. 4/5, 2014, Vienna



Joshua de Haseth

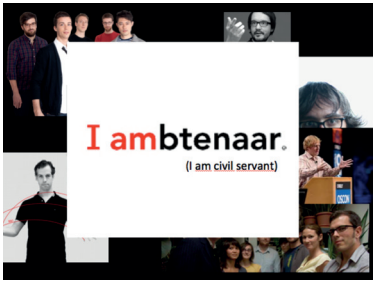
Employed at: Province of Flevoland
Freelance: Visual Data Works
Studied: Human Geography

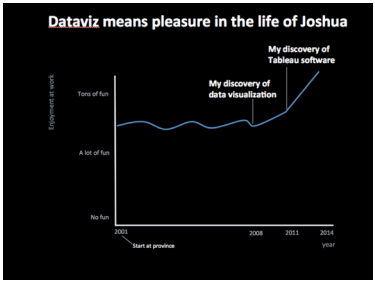
Story

Transforming me
Transforming data
Transforming government

Transforming me

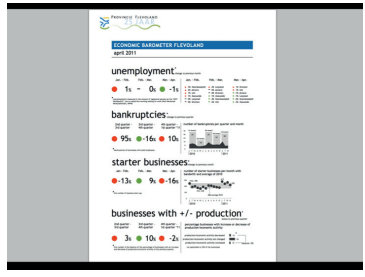




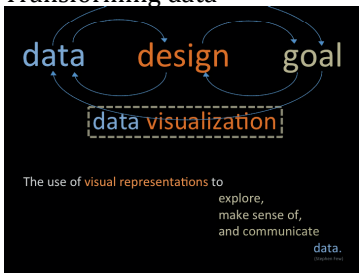


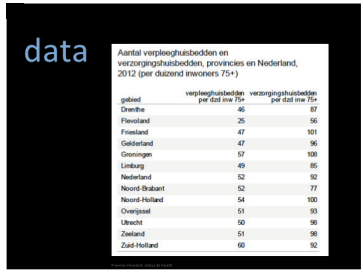




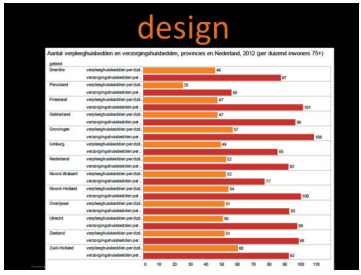


Transforming data

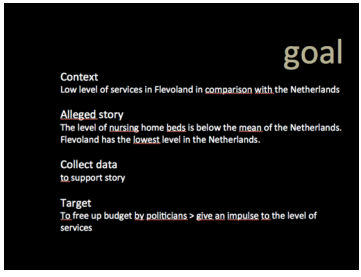


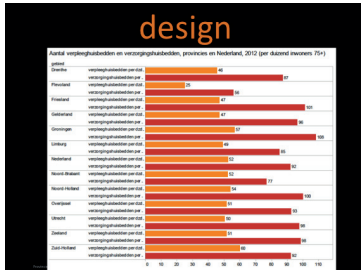


gebied	verpleeghuisbedden per duizend inw 75+	verzorgingshuisbedden per duizend inw 75+
Drenthe	46	87
Flevoland	25	56
Friesland	47	101
Gelderland	47	96
Groningen	57	108
Limburg	49	85
Nederland	52	92
Noord-Brabant	52	77
Noord-Holland	54	100
Overijssel	51	93
Utrecht	50	98
Zeeland	51	96
Zuid-Holland	60	92









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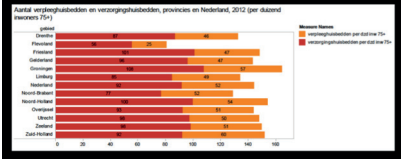

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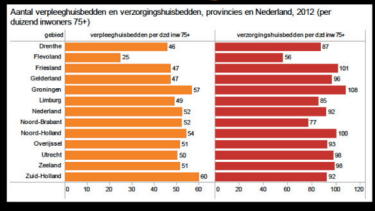

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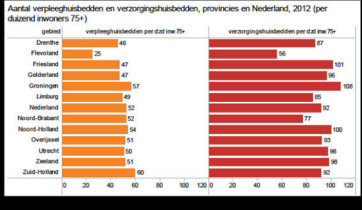

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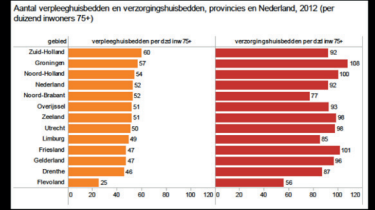

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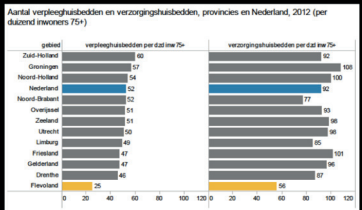

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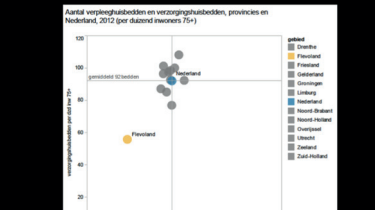


PROVINCIE FLEVOLAND

Gebiedsontwikkeling NIEUWE STIJL

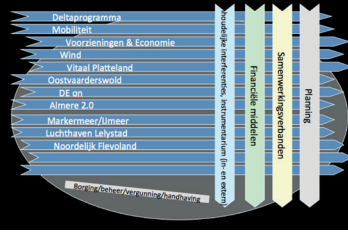
New concept in spatial development

so?

work smart
work together



the braid mat (het vlechtmatje)



what problem?



what goal?



what audience?





what data?



dataviz to the rescue



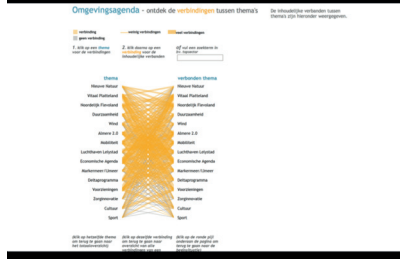
"Overview first,
zoom and filter,
then details-on-demand"

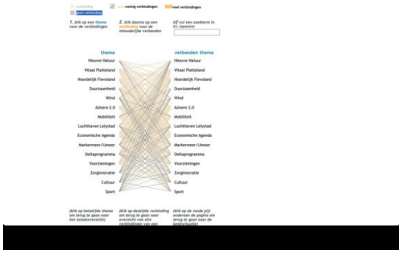


mantra by Ben Shneiderman

viz demo


Provincie Flevoland
www.flevoland.nl
Home
Belangen
Verbindingen
Samenwerking
Rijksdiensten
Financiën
Planning
De omgevingsagenda
Belangen
Verbindingen
Samenwerking
Ondernemers
Voor meer informatie
Infographic
Introductieflyer
Rijksdiensten
Europese kaders
Rijksbeleid (kaders)
Rijksbeleid (visies)
Financiën
Planning
Flevoland


Omgevingsagenda - ontdek de verbindingen tussen thema's
De inhoudelijke verbanden tussen thema's zijn hieronder weergegeven.
verbinding
geen verbinding
weinig verbindingen
veel verbindingen
1. klik op een thema voor de verbindingen
2. klik daarna op een thema voor de inhoudelijke verbanden
ref vul een zoekterm in bv. klapwiel
thema
verbonden thema
Nieuwe Natuur
Vitaal Platteland
Noordelijk Flevoland
Duurzaamheid
Wind
Almere 2.0
Ambiëntt
Luchthaven Lelystad
Economische Agenda
Markenmeer IJmeer
Deltaprogramma
Voorzieningen
Zorginnovatie
Cultuur
Sport
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden


Omgevingsagenda - ontdek de verbindingen tussen thema's
De inhoudelijke verbanden tussen thema's zijn hieronder weergegeven.
thema
verbonden thema
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden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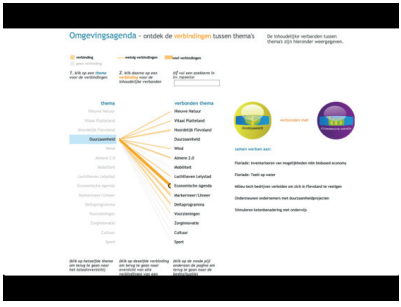
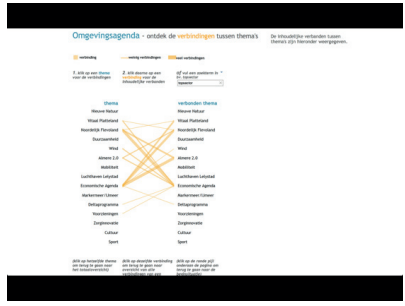
thema
verbonden thema
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden


Omgevingsagenda - ontdek de verbindingen tussen thema's
De inhoudelijke verbanden tussen thema's zijn hieronder weergegeven.
thema
verbonden thema
verbonden met
samen werken aan:
Floriade: Inventariseren van mogelijkheden mbt biobased economy
Floriade: Twist op water
Milieu tech bedrijven verbinden om zich in Flevoland te vestigen
Ondernemers ondernemers met duurzaamheidsprojecten
Stimulerne kenbenkenderling met onderwijs
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden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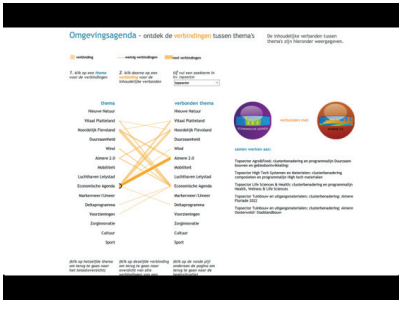
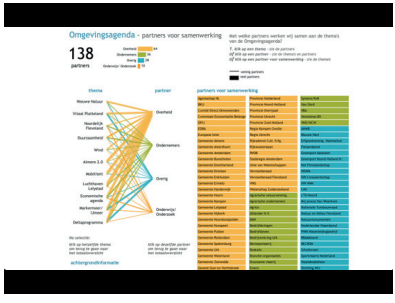
thema
verbonden thema
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden

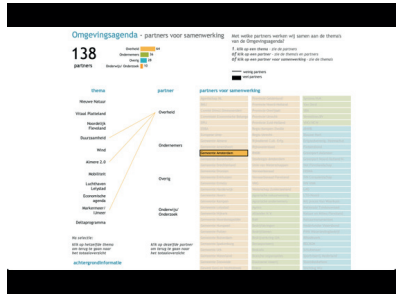

Omgevingsagenda - ontdek de verbindingen tussen thema's
De inhoudelijke verbanden tussen thema's zijn hieronder weergegeven.
thema
verbonden thema
verbonden met
samen werken aan:
Topsector Agrofood: clusterbenadering en programmatijn Duurzaam bouwen en gebiedsontwikkeling
Topsector High Tech Systemen en Materialen: clusterbenadering composieten en programmatijn High tech materialen
Topsector Life Sciences & Health: clusterbenadering en programmatijn Health, Wellness & Life Sciences
Topsector Tuinbouw en uitgangsmaterialen: clusterbenadering: Almere Duurzame Stad
Topsector Tuinbouw en uitgangsmaterialen: clusterbenadering: Almere Duurzame Stad
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden

Omgevingsagenda - ontdek de verbindingen tussen thema's
De inhoudelijke verbanden tussen thema's zijn hieronder weergegeven.
thema
verbonden thema
klik op hetzelfde thema om terug te gaan naar het totaaloverzicht
klik op deze/alle verbinding om terug te gaan naar overzicht met alle verbindingen
klik op de rondo zijd onderaan de pagina om terug te gaan naar de inhoudelijke verbanden









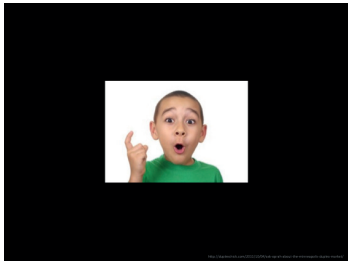


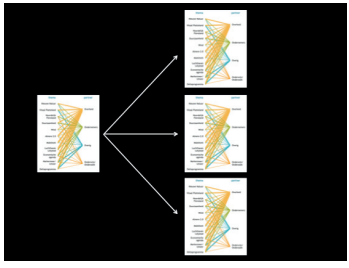


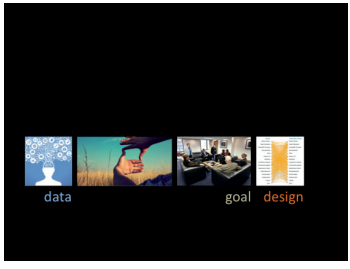
Transforming government











Project: www.flevoland.nl/omgevingsagenda
Movie 1: https://www.youtube.com/watch?v=S3Usc8OcpLw
Movie 2: https://www.youtube.com/watch?v=C4zmEflEJPY

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@joshuadehaseth

Workshop

RUHL Glenn



Workshop: Using Information Graphics as an Integrated Approach to Community Service Learning

RUHL Glenn
Mount Royal University - Canada

Infographics also known as information graphics are visual representations of knowledge or data. Infographics can give small or complex amounts of information quickly for a reader to look at. This workshop will demonstrate how students defined selected terms relevant to communication, created an infographic with respect to the identified theme, and provided a rational for the selection and use of the data used in the preparation and public presentation of an infographic.

Community Service Learning (CSL) offers students the opportunity to make a positive impact in local and global communities through hands-on experience. Professors at Mount Royal University, in Calgary, Alberta, Canada have employed CSL as a teaching pedagogy for more than twenty years through community based projects where students apply academic theories and processes. Community organizations work with professors to develop deep learning experiences that address real-world challenges and opportunities. This presentation demonstrates how second year Mount Royal University Information Design students consider the field of social semiotics and the theoretical and practical study of these cultural aspects in areas including, but not limited to, discourse in place, social semiotics and the grammar of visual design. It is important for the information designer to have the analytic and interpretive ability to understand the pattern of "ideas" and the ability to re-express those ideas analogously within a world view in both visual and written formats. This workshop will demonstrate how this approach increases student knowledge of a specific topic and how to communicate this understanding to a wide audience through community based learning.

Using Information Graphics as an Integrated Approach to Community Service Learning

"Background to the Workshop"

Glenn Ruhl, PhD
Professor, Information Design

MOUNT ROYAL
UNIVERSITY
1910

Background
Mount Royal University (MRU), located in Calgary, Alberta, Canada, has offered a baccalaureate degree in Communication Studies with an Information Design major since 2008. Although an old concept in academic circles, the term "Information Design" has, in Canada, only recently gained recognition in the public community.

Approximately 40 students enter the Information Design program each year. The rigorous four-year program includes information design specific courses as well as graphic design, technical writing, communication theory, rhetoric, typography, usability, project management and general education. In addition, an experiential learning component consisting of a paid 450-hour work term is required of all students.

What is an integrated approach?
A combination of theory, applied knowledge and community involvement is central to the educational philosophy of the Mount Royal degree. In this regard, students are required to work with the local community in the application of their knowledge. This combination of theoretical and applied learning results in an integrated approach to the study of Information Design.

What is Community Service Learning?
Community Service Learning (CSL) recognizes student contributions toward the sustainability of local, regional, and international organizations and communities. MRU recognizes Community Service Learning as a high impact teaching practice that offers students the opportunity to make a positive impact in local and global communities through hands-on experience. Professors at MRU have employed CSL as a teaching pedagogy for more than twenty years through community based projects where

students apply academic theories and processes. Community organizations work with professors to develop deep learning experiences that address real-world challenges and opportunities.

In an effort to recognize student engagement MRU has developed a CSL Citation that is recorded as a co-curricular record on the student transcript. The Citation demonstrates that a student has significantly integrated CSL into their postsecondary education by completing three courses for a minimum of nine credits that are designated as involving community engagement.[1]

CSL designated courses entail at least twenty hours of community service, and are worth at least 15% of each course grade. The three courses that qualify for Information Design students are COMM 2680 - Intercultural Communication, COMM 3600 - Usability and COMM 4665 - Instructional Design.

Event Examples and Assignments
The intercultural communication course (COMM 2680), required of students in their second year, is an excellent example of the Community Service Learning integrated approach. Each year, a "theme" or topic is selected that requires students to conduct thorough research culminating in the creation of an infographic. This infographic is then put on public display and defended in a special community event. This event requires considerable coordination with community agencies and experts.

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1 Information Design degree courses at MRU are 3 credit hours, or 3 hours per week for 13 weeks each term. An MRU degree consists of 120 credit hours and may be completed in four years.

As the students are engaged in their research, they are aware the data collected must adhere to strict standards. In addition, the final presentation must be clear in terms of the principles of argument theory.



Photo: Kerri Martin, Mount Royal University

Student Engagement with the Community: Information Design student David Campbell makes his presentation on the topic of Aging, June, 19, 2014.

"What a fabulous morning it was! Younger people presenting amazing information about older people - and enjoying it! Thanks so very much!"
Luanne Whitmarsh Chief Executive Officer, Kerby Centre, commenting on the June 2014 event.

How Assignments are Created

The process and requirements for the course assignments involve three items. These include developing familiarity with terminology (definitions), the mechanics of information graphic construction and the rationale for theme or topic selection.

As students construct and prepare their infographics, they are reminded to consider audience and genre. Their audience should be able to recognize the scholarship that has gone into the design. The students are urged to consider their infographic as something worthy of publication in the Economist or a major newspaper. At the very least it should be worthy to appear in USA Today. Students familiarize themselves with the genre of their topic by consulting provided examples and references and through the analysis of a variety of infographics. Finally, they must explain the idea or the message they are trying to communicate and why they selected the elements used to communicate that message. In short, they must display, compare and contrast differences, demonstrate causality, provide multivariate analysis and structure, with an information graphic that completely integrates words, numbers, images and diagrams.

Project Approach

A useful infographic should have a well-defined purpose. It should be universally relevant so that it applies to the largest audience possible. An infographic should be

interesting and relevant and display data obtained from reputable sources without distortion.

Legibility is an important quality in making an effective infographic. Students learn to use data to make sense and provide accurate information. By using appropriate font and contrast the goal is to create an infographic that is clear, concise, complete, correct and culturally sensitive. Being creative with graphical elements is important and certainly attracts an audience; however, it can just as easily drive them away. Students are encouraged to produce a final design that is attractive and compelling without being obtrusive and simple without being boring. In short, the final infographic must incorporate the elements of good design, use space effectively and, above all, clearly convey the intended message.



Photo: Kerri Martin, Mount Royal University

Student Display Examples, June 2014

Further Considerations

According to Lippmann, people resort to stereotypes because the world that we have to deal with is out of reach, out of sight and out of mind. Thinking about group-relevant social issues often requires reliance on stereotypes because the actions and characteristics of the relevant social groups are too numerous and diffuse to be grasped directly by the senses.

(Lippmann 1922:18; Gill 2003:323-324)

Walter Lippman (1889-1974) the American political commentator and writer brought the term "stereotype" to public prominence.[2] For anyone contemplating the use of information graphics to deliver information to select community agencies, there are a number of considerations such as stereotypes that are central to making the process run smoothly. Perhaps the most obvious considerations are stereotypes and audience. Gaining a firm understanding of these areas is vital to the integration of themes in a way that will resonate with a community.

There are a number of activities that will help create awareness leading to infographics that are sound and impactful. Understand your audience, recognize that "words divide and pictures unite," consider the elements of time and space, and embrace the power of numbers. In all cases, your goal should be ". . . to overcome barriers of language and culture, and to be universally understood" [3]

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[2] **Lippman used the term "stereotype" in his 1924 publication Public Opinion to describe the cognitive limitations people have interpreting the world.**

[3] **http://www.gerdarntz.org/content/gerd-arntz#isotype**

Marie Memories

PERKS Sue



The day I met Marie'

Perks Sue
University Creative Arts Epsom - UK

The day I met Marie' Memories of Marie Neurath: and how Isotype has informed my design practice connections and influences

My Great Uncle Bill Sandland met Otto Neurath in 1945 in his capacity as councillor with a responsibility for housing in Bilston. My family originate from this English midland town, then known for its iron and steel, enamelling and slum conditions. The then Town Clerk, A.V. Williams heard of Neurath's work in Vienna and invited them over to Bilston (from their new home in Oxford) to see if they had ideas on improving health and housing. Consequently, Bilston became the place where the last Isotype exhibition was held in 1946 (Otto died before it was completed). When my mother was a child, her doctor was part of Neurath's team in Bilston, trying to improve the lives of residents – just as Neurath did in Vienna at the Gesellschafts- und Wirtschaftsmuseum from 1925-1934. The Bilston project was very important to Otto, as Marie Neurath described in her account of the last few hours before he died in December 1945, published in 'Empiricism and Sociology' (1973). This reflective paper will discuss how these historical facts relate to my deepening engagement with Isotype and how the concept of the transformer has informed my activities as a designer, researcher and educator. It will also describe coincidences and connections – my family history, activities as a designer of educational exhibits, work at the Natural History Museum from 1983 – 2010, a meeting with Marie Neurath – and how it all eventually lead to my PhD on the legacy of the principles of Isotype.

This light-hearted, reflective presentation examines how Isotype has influenced me through a variety of quite strange coincidences – from accidents of birth to strange realisations that events have appeared to connect and make sense of my working practice as a visual communicator and educator. The story begins in the 1940s in Bilston, a Black Country town, near Birmingham in the industrial West Midlands where my family originate.

My mother Muriel Dorothy Turbin was born in 1931, the first child of Rachel and Ephraim Turbin. When she was young she caught diphtheria, a killer disease of the time. However, being a very determined child, and not understanding the severity of the condition, she somehow managed to dislodge the rubbery mucous membrane from her throat, which would eventually have slowly suffocated her – thus saving her own life. The doctor who had initially failed to diagnose her illness was a Dr Robert Abbott. When it was realised what had happened, my mother was rushed off to the quarantine hospital in a horse and cart, where she made a full recovery.

And this is the first coincidence. Dr Robert Abbott, a family doctor in Bilston in 1945 was a member of a local committee who was working with Dr Otto Neurath on a scheme to improve housing conditions in Bilston. A plan was needed to reduce infant mortality, improve the lifestyles of slum dwellers and try to prevent killer diseases such as rickets and diphtheria. A newspaper article and an interview Dr Abbott gave to the BBC testify to this. The News Chronicle newspaper published an article entitled 'Man with a Load of Happiness' on 4 December 1945 (a few weeks before Neurath died). The article describes how he had been asked to help transform life for the 'inhabitants of 200 acres of joylessness' by acting as a 'sociologist of happiness' through an exhibition using diagrams and models as a sort of early public consultation exercise on proposed new housing. It was named the 'Bilston Venture' and Neurath wanted the town planners to understand the needs of the people and make their lives happier and healthier though improved social housing and the integration of old and young people within the community. Neurath's aim was to give people the chance to live good and happy lives. He summed it up by saying "You cannot organise kindness, but you can organise the conditions for it" (News Chronicle 4 December 1945). Later, after Neurath's death, Dr Abbott discussed Neurath's work in Bilston in a five-minute interview with the BBC Home Service on the evening of 7 November 1946.

The Bilston venture itself was the brainchild of forward-thinking Town Clerk Mr A.V. Williams (later General Manager of the Development Corporation of the new towns of Peterlee and Newton Aycliffe in the north east of England). From writing by Marie after Neurath's death on December 22 1945, it would appear that he was delighted to have been given this role to resurrect the work he did at the Gesellschafts- und Wirtschaftsmuseum in Vienna from 1925-34, in a place where it was sorely needed in 1945. Marie, in her account of Neurath's last few hours in Empiricism and Sociology (1973) described how they were discussing the 'Man with a Load of Happiness' article with friends on the night he died.

The culmination of Neurath's work on the Bilston Venture was to be an exhibition in a renovated shop in Oxford Street, Bilston, (which my mother told me was a rather run down part of town) where the public would be asked what type of housing they housing. Unfortunately things did not go to plan for several reasons. Firstly, Neurath

would prefer to live in and shown the advantages of healthy living and well spaced housing. Unfortunately things did not go to plan for several reasons. Firstly, Neurath died before the scheme was completed, and Marie, as the sole remaining director of the Isotype Institute completed the job in his absence at what must have been a very difficult time in her life. The second reason why this last Isotype exhibition in the UK was not a big success surrounded the departure of Mr A.V. Williams (to his new job in Peterlee and Newton Aycliffe). He was replaced by Mr A.M. Williams, who was not a great supporter of the Bilston Venture, was wary of working with a German lady in post-war Britain, and could not promise to deliver the proposed new housing which the scheme was describing. Consequently it was not well publicised and closed very quickly.

A newspaper article 'Ants will Guide this Town to Healthier Living' of 2 November 1946 describes what the exhibition would look like with charts and models. The shop was used as a venue (rather than a museum) because it was a more accessible foe visitors. To attract attention, a live ants' nest was placed in the window to attract passers by and to illustrate the benefits of working together as a community. I asked my parents, Muriel and Allan Walter Perks, (who in 1946 would have been aged 15 and 16 and living in the area) if the could remember the shop or the ants' nest. Neither had any memories of it, but then the target audience would have been young families rather than teenagers. To try to see if anyone had any recollections of the Bilston Venture I wrote a piece in the local Express and Star newspaper a few years ago. I realised that responses would have been unlikely as the young parents of the 1940s would now be in their 90s. But there is correspondence in the Otto and Marie Neurath Collection at University of Reading regarding the feedback that A.M. Williams finally gave to Marie on the exhibition. It suggests that the exhibition was not a huge success and that some visitors found the graphic language of Isotype difficult to understand, expecting more depth of information and hidden meanings from the charts – but that is not the nature of Isotype!

But I've found out recently that the Bilston Venture did have a pedagogic legacy. My Uncle, Robert Turbin (born in the mid 1940s) wrote to me describing a school project – which was to build an ants' nest – and his was singled out as being a good example (probably thanks to my grandfather, James Turbin a skilled carpenter who was employed at the time erecting the prefabricated houses that replaced the promised permanent houses which had failed to be built). Robert's teacher had obviously been to the exhibition and told his class about what Robert described as the 'Bilston Story'.

The second coincidence concerns my great uncle (by marriage), Councillor William H. Sandland who was married to my grandfather's sister. Uncle Bill was a staunch supporter of the Labour party and known as the person you should go to if you needed a council house to rent. He eventually became Mayor of Bilston during the late 1950s, but met Neurath earlier in 1945 as part of the Bilston Venture. I never met Uncle Bill, but his wife Great aunt Ruth talked about meeting 'the man from Vienna' at a civic function.

Of course I knew nothing of Otto and Marie's work in Bilston until 1983, when I started researching my MA dissertation on the design of educational exhibits while studying at the Royal College of Art. But how did I originally get to know about Isotype?

Man with a Load of Happiness

He learned his ideas in Vienna. Here STANLEY BARON tells how he is going to put them into operation in a drab Staffordshire town

ON May 14, 1940, a corpulent six-footer with a bright brown eye and a fluff of grey hair round a bald broad scalp leapt into the motor lifeboat Good Hope on the coast of Holland and with the subsequent aid of the destroyer Venomous made his way to England.

He carried very little baggage; his most valuable stock, indeed, was in his head. When Dr. Otto Neurath invented isotypes in 1923—11 years before the Dollfussites drove him into political exile—they were used primarily to illustrate the ideas he propounded as Director of the Museum of Housing and City Planning in Vienna, later the Museum of Social Sciences.

★

WITH these symbols, which can be set out to illustrate the facts about any human activity in the world, the doctor taught the people of the Vienna slums how to be healthy, how to be happy. From the Fascist point of view, he went too far, for by means of this visual education he began in the end to teach them how to think for themselves, and that led to his downfall.

Now, in Bilston, Staffordshire, the doctor is to go to the slums again. To the inhabitants of 200 acres of joylessness—one-ninth of the whole area—in the heart of the town, he will take a message that reconstruction in the truest sense of the word depends on their own ultimate effort.

He has been appointed by the corporation to instil the facts of public health and all it means in terms of happiness *before* the old houses are swept away and the new ones arise. In addition—a most imaginative stroke—he will act as consulting "sociologist-of-happiness" to see that the *planners* know what the people want. It is the first appointment of its kind in the country.

★

WHAT can a Viennese teach the English? I have been talking the matter over with Dr. Neurath. His ideas are as revolutionary as they are simple. They have the explosive force of the simple statement which everyone overlooks.

One of his first points is that in Britain there is a "forgotten third" of the adult population. Of a total of 35,000,000 over 21 years old, 7,800,000 of us are bachelors or spinsters and 4,300,000 of us are over 65 years old. The proportions vary through the classes, but in the slums the living conditions which go with them are accentuated, in a manner too familiar.

Very well, says Dr. Neurath, first we will teach the simple facts about health and physical happiness. Exhibitions with plain and striking diagrams and models, and perhaps films too, will be carried to the streets, and there we will talk the matter over with the people.

We will call the whole thing the Bilston Venture, he insists, because the word "experiment" is against his feelings—"human beings do not like to be guinea-pigs."

Then, instead of segregating the elderly into groups of cottages, as some authorities propose, he would disperse them among flats—one here, one there, as needed—built into the ground floors of otherwise normal two-storey houses, so that instead of being separated from younger people they will merely live separately.

Father and mother, under this system, can live round the corner and pop in for Sunday tea with son and daughter and grandchildren.

Bilston Corporation, he told me, has already adopted this idea for its housing plans; and he would like, in addition, to have these veterans' flats equipped with better-than-average kitchens, better and simpler heating apparatus and maybe a free vacuum cleaner. For Dr. Neurath believes that the advancing years bring rights in addition to pensions.

He has an idea that some elderly people, having drudged all their lives, will wish to use a part of their leisure helping others, as in fact is already the slum custom.

★

REMEMBERING the London "grannies" who stood fast in the blitz, he would give all old people everywhere—and anyone else who feels the need—"silence rooms," near a bus stop, close to the shopping queues, where they can sit and rest and "doze a little"; but they might also, he thinks, like to help in running the room-libraries which he wants to establish in every street.

If the dishonest steal the books from under their noses (but he doesn't believe they will) it will still be cheaper than employing paid assistants, whose work will remain at the main library and branches.

All such proposals exhibit in action his maxim, "that a normal society consists of a majority and a minority and the less you split them the more you create a normal community."

He would not split the spinsters and bachelors from the community by building special blocks of flats for them, as some have suggested, but would give them—if they wish—a room of their own, with kitchenette and shower, built as a flatlet into the ordinary run of housing, offering them freedom from the whims and peculiarities



DR. OTTO NEURATH will "see that the planners know what the people want"

of landladies; freedom to be alone or with friends as they please.

Talk of segregating "difficult people" makes Dr. Neurath impatient, for his experience is that the phrase itself is largely a misnomer, brought about by dwelling too much on "difficult" or not enough on "people."

He says: "If people put the coals in the bath, give them a better coalhouse. If they tear the fences up for firewood, give them firewood. I once found a family who kept pigs in the bath. They said the municipal piggeries gave them rheumatism. So we built new piggeries.

"'Difficult' people need the best house possible. If they are too lethargic to use the ordinary facilities, give them better facilities, easier to work. If they are dirty, give them better floors, easier to clean. Then they will be cleaner. The more 'difficult' they are the more they need help."

Even the so-called intractables, Dr. Neurath holds, must be endured: for to separate them from the community means the stigmatisation of the children, tomorrow's better citizens.

★

HOW to sum up? I think it can best be done by saying that the idea behind the Bilston Venture is to show that people, if given the chance, will exhibit the good in the ordinary man and not the bad. Or as this cheerful Viennese doctor puts it: "You cannot organise kindness, but you can organise the conditions for it."

You cannot create a community artificially, but give people freedom to create their own communities and they will probably do it.

It is appropriate to add that when the town which is sponsoring this brave and human conception has completed its work it will own 90 per cent. of its own land.

BOOKS

Edited by Robert Lynd

"CORN ON THE COB" (Forge Publications, 3s. 6d.) is A. L. Lloyd's selection of the folk-songs of the United States. In it are the violent and familiar favourites such as "Casey Jones" and

vast legions of starlings and a breeding place for the black-red[illegible] where hunting owls are to be heard in the streets of Bloomsbury.

'At the end of the book we have

I completed my BA in graphic design at what was known as Leicester Polytechnic (now De Montfort University) from 1978-1981. I had always been interested in diagrams and museums. In 1980 Peter Rea became Course Leader of the School of Graphic Design. He had been taught at the London College of Printing (now London College of Communication) during the 1960s by Ernest Hoch, an Austrian who was aware of Isotype and later went on to teach at University of Reading. At Leicester, Peter remembers giving me Rob Waller and Michael Macdonald Ross's 'The Transformer Revisited' article to read, and I instantly knew that I wanted to be a transformer – but I didn't know how!

I applied to the Royal College of Art to study Graphic information. This brought me from the Midlands to London, and again (another coincidence!) I was lucky enough to get a vacation job at the nearby Natural History Museum, where I spent two summers designing graphics for temporary exhibitions, changing insect repellent around stuffed animals and being on the periphery of a scheme which was inspired by Isotype.

At the heart of what was known as the 'New Exhibition Scheme' – originally devised by Dr Roger Miles and his team, were the transformation partnerships – parings of scientists and 3D designers (who all seemed to wear overly large coloured spectacle frames, played badminton and were looked on with some scepticism by some of the other more traditional museum staff!) The partnerships designed the exhibits for ground breaking exhibitions such as 'The Hall of Human Biology' (opened 1977) and 'Understanding Ecology (opened 1978). On my first day at the Natural History Museum in the Department of Public Services (headed by Dr Miles) my wonderful boss Ron Nash gave me a copy of the Transformation Reader, a manual devised by Miles on how the philosophy and practical workings of the New Exhibition Scheme should work. It was full of inspirational, contemporary and historic texts from authors such as Otto and Marie Neurath, museologist Alma Wittlin, TV presenter and author Brian Magee, Michael Macdonald-Ross and Rob Waller (writers of the 'Transformer Revisited'), Professor Michael Twyman (University of Reading), educational technologist Brian Lewis and Robert M. Gagné (writer of Conditions of Learning). I'm sorry to say that it meant little to me at the time. At that point the New Exhibition Scheme was in full flow, but hadn't managed to quite emulate the success of the almost exhibit-free 1977 Hall of Human Biology. But it was fascinating to actually be a small part of what I learned much later was such an innovative scheme.

But as I got to know how things worked a little more, I found out what I could from Roger Miles, (the architect of the scheme), David Gosling (head of exhibition design) and various designer/transformers. As background research I visited the University of Reading and their archive and although I found very little on the Natural History Museum, I was astonished to find a couple of archive boxes relating to Bilston – and on closer inspection learned that the last Isotype exhibition happened there! I consequently contacted Wolverhampton archives (where archival material relating to Bilston is kept) and got a little more information. At that time they too knew very little about Neurath's work in Bilston.

I was also introduced to Robin Kinross, and heard about his definitive MPhil thesis on Isotype and the 1975 exhibition in Reading (which later moved to Vienna). Robin Kinross very generously gave me Marie Neurath's phone number, and so, in Summer 1983 I went to her Belsize Park basement flat to meet her. I told her where my family originated from and she said 'Welcome, girl from Bilston' – I've never forgotten it. She was warm, charming, very upright and friendly. I instantly liked her. We kept in contact and exchanged a few Christmas cards before she died. I have a Christmas card in my loft somewhere illustrated with a UNICEF dove.

The MA dissertation on the design of educational exhibits was well received, I got my MA and left he RCA in 1984. I did various freelance projects at the Natural History Museum, small temporary exhibitions and brochures for fundraising, while working on larger exhibitions for the BBC. I was aware that the Department of Public Services was in disarray and in 1991. Roger Miles realised that the security of a civil service post was not conducive to continued creativity and the transformation partnerships were running out of steam. As a consequence, alongside many complex political wrangles, most of partnerships were broken up, followed by raft of redundancies.

But a national museum still needs to be designed! The Geological Museum was merged with the Natural History Museum and became the Earth galleries, and several permanent exhibitions were commissioned, one of which was 'From the Beginning' – the story of the last 600 million years. One of the project managers Martin Surridge had the idea that he would partner up an ex NHM transformer, Mark Magidson and myself as a graphic designer to work on the exhibition design. We worked within a team that included museum scientists, educationalists, model makers, audio-visual designers, editors, scriptwriters and various exhibition contractors. The collaboration between Mark and I has been very fruitful and the principles of transformation, teamwork, working with subject experts, understanding and explaining concepts simply, remain. Our last big commission together was Tudor House Museum, Southampton which opened in 2012, where we told the story of an historic house through the lives of the people who lived there from Medieval times onwards. Their lives mirrored the history of Southampton.

And the final coincidence happened in 2007 when I was searching for a part time teaching post and saw a PhD studentship based at University of Reading to work on the Isotype Revisited project. I'd never thought that a PhD was a possibility before, but it took me about 5 seconds to decide to apply for it! And it was a big struggle after 25 years out of education, (and never being particularly academic) whilst co-running a design partnership, teaching part time and managing a home, a husband and two dogs. But I got my PhD in 2012 and it reinforced my resolve to become the transformer I always wanted to be. It has allowed me to create a strong synthesis between my writing and research, creative design work and teaching activities. A year ago I started work as Subject Leader for MA Graphic Design at University for the Creative Arts in Epsom where I feel that I am in the perfect place at the perfect time to introduce transformation to another generation.

Spaces

PAULUK Marcel

SCHLAICH Sibylle & NEHL Heike

BAUER Erwin K.

KOYAMA Keiichi



Collaborative transformation: Improving the design of public information symbols

Pauluk Marcel
University of Paraná Curitiba - Brazil

This presentation aims to advocate the inclusion of collaborative transformation within the process of creation and subsequently standardization of public information symbols. The argument will be divided into five premises – presented and defended in order of increasing specificity –, from which the final conclusion will be drawn. The premises are as follows: 1. Public information symbols should be standardized; 2. The design of public information symbols is always the result of a transformation process; 3. Transformation processes emerge from the interaction of many factors and do not need to be confined to a single transforming agent; 4. Collaborative transformation processes can be more creative, productive and democratic than individualistic transformation processes; 5. There is a mismatch between current practices of designing public information symbols and their standardization process; From these premises follows the conclusion: The adoption of collaborative transformation processes in public information symbol design as an essential stage in the general procedure of graphical symbol standardization should improve design innovation, comprehensiveness and social acceptance of the resulting standardized symbols. The presentation ends with two brief remarks, answering the following proposed questions: “Is there any problem with the lonely transformer?” and “Why only public information symbols are addressed?”

Collaborative transformation: Improving the design of public information symbols within the standardization process

Marcel Pauluk – University of Paraná, Brazil

Introduction

This article advocates the inclusion of collaborative transformation within the process of creation and subsequently standardization of public information symbols. The argument will be divided into five premises – presented and defended in order of increasing specificity –, from which the final conclusion will be drawn.

First Premise: Public information symbols should be standardized

According to the ISO/IEC Directives Part 2, which dictate the rules for the structure and drafting of International Standards, a standard is

> a document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

Reduced to a minimalistic two-word definition, that means: A standard is an *approved model*.

Public information symbols issued by the ISO are standards because they are approved, that is, they are established by consensus and validated by a recognized body, and because they are models, that is, they are examples to be followed and imitated.

Public information symbols created through open collaborative transformation processes like *Icon Camps* (see the 4th premise) may be established by consensus and may have all the requisites to function as examples to be followed or imitated, but they are not approved by a recognized body.

The importance of standardization is that it promotes international recognition and avoid confusion. The cyclist front view pictogram below, for example, was designed in May 2012 during an Icon Camp in Curitiba, Brazil,

and two years later it found its way into the traffic sign system of the same city. But the graphical symbol and its meaning – “bike lane” – is not part of



Photo: André Cardoso

any standard. So it will probably not be used in other cities, or maybe it will be used for a different purpose, with a different meaning. And situations like that do not ensure the recognition of a symbol and do not avoid confusion.



Photo: Ciclo Iguaçu

Second Premise: The design of public information symbols is always the result of a transformation process

There is still some dispute around the historical concept of “transformation” and in what way it distinguishes itself from the modern concept of information design. For Christopher Burke, for example, “the transformer was a prototype of the modern information designer” (Burke, Kindel & Walker 2013: 14). Marie Neurath, in an interview featured in the 1990 documentary “Otto Neurath: der unbekümmerte Denker”, said: “It was my task to convert the knowledge that they [the scientists] brought us into pictorial form”. Anyway, it is clear that the process of transformation included the visualization of all kind of concepts and not only statistical ones.

The difficulties that may be encountered during the process of converting concepts into pictorial form are well exemplified by Jeremy Foster, chair of the subcommittee for Public Information Symbols at the ISO Technical Committee 145 for Graphical Symbols.

> It's quite simple to denote certain things. This is a fire extinguisher; this is the emergency exit. It's when you get to the other more complicated things ‘do this’ and ‘don't do that’ that it can become more difficult and more complicated. And so, when you are trying to describe a series of things, rather than just one thing, then life becomes much more difficult. It's easy to use symbols for nouns, much different for verbs and adjectives and adverbs and things of that kind. (J. Foster in Peckham 2013: 04’42”-05’16”)

Marie Neurath, commenting on the process of creating pictograms for the book *Basic by Isotype,* a primer for Basic English, said at first that "to introduce vocabulary with the help of pictures is often quite simple." Then she unfolds lots of examples of unexpected difficulties she was confronted with. At the end she concludes: "In short, there was a surprisingly large number of problems to solve, and the symbol-making approach of Isotype was often a great help" (Neurath, M; Kinross 2009: 48).

Third Premise: Transformation processes emerge from the interaction of many factors and do not need to be confined to a single transforming agent

Robert Waller, reflecting about his and Michael Macdonald-Ross' influential 1976 article "The transformer revisited", noted that although they were talking of the transformer as a single person, they were also describing a process, and perhaps a team (Macdonald-Ross, Waller 2000: 190).

Thus, the process of transformation do not need to be thought of as confined to a single brain. The concept of emergence borrowed from the cognitive sciences can be useful to explain how transformation works. Emergence occurs when the whole of a system exceeds the sum of its parts. In emergence there is a cooperation of things, there is a convergence of different processes or capabilities towards a common goal that can not be achieved by any of those individually.

In the transformation of concepts into pictorial forms, the following processes or capabilities can be identified:

1. Conceptualization: The transformer, helped by the expert, gathers and analyzes some key-concepts to be converted into pictorial form. He or she answers the question "What should be transformed?"
2. Visualization: The transformer tries different semiotic approaches to visually represent the concepts. He or she answers the question "What kind of pictorial form brings this concept to mind?"
3. Illustration: The transformer, directing the graphic designer, finalizes some chosen alternatives and evaluates the results. He or she answers the question "How best to graphically represent the chosen pictorial forms?"

Therefore, collaborative transformation would be a kind of transformation where those three basic processes would be carried on not by a "lonely transformer" but by a team. An Icon Camp is an example of the application of this method of collaborative transformation in the devise of pictograms in general and of public information symbols in particular.

Fourth Premise: Collaborative transformation processes can be more creative, productive and democratic than individualistic transformation processes

Icon Camps were created in the USA in 2011, when a nonprofit civic organization called “Code for America” joined forces with the “Noun Project”, a website that aggregates and categorizes graphical symbols that are created and uploaded by a community of enthusiasts around the world. Their joint mission was to gather some people sympathetic to a civic theme and produce symbols together. As they perfected their workshops, they published tutorials on how to host Icon Camps. Here are the main points:

1. Select a Civic Theme you’re passionate about
2. Think of a list of 30-50 concepts that need to be visually defined
3. Contact experts in the field to speak at your event, and provide an overview of which symbols would be most useful
4. Participants should form groups of 3 to 5 to work on designing symbols as a team. This encourages discussions of the concept and helps narrow down the essence that should be used for symbol design
5. The groups should have different skill sets. The participants should select a name tag that best describes them. The options are: 1. Graphic designer, 2. Person who cares about civic design (a non designer), and 3. Expert in the chosen theme
6. End the day with group presentations about which symbols were designed, what design challenges each group faced, and an overview of which symbols were successful in communicating their intention.
7. Collectively define which symbols are ready to be converted to graphic by volunteer illustrators

All the three basic transformation process are here: Conceptualization (“What should be transformed?”), Visualization (“What kind of pictorial form brings this concept to mind?”) and Illustration (“How best to graphically represent the chosen pictorial forms?”), each one of them understood as a kind of skill and all three working together towards the emergence of pictorial forms.

Fifth Premise: There is a mismatch between current practices of designing public information symbols and their standardization process

Symbols produced through open collaborative transformation processes are not standardized. Standardized symbols are not produced through open collaborative transformation processes. That is the problem.

Since 2011, 22 independently organized Icon Camps took place around the world. The main themes were: Sustainable Food and Farming, Open Data, Climate Change Risk, Cultural Heritage, Investigative Journalism, Energy Efficiency, Education, etc. More than 600 people attended the workshops and generated more than 250 high quality symbols, all now in the public domain. The Noun Project website also includes pictograms uploaded by individual contributors and by institutions like the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) or the MIT. Today they sum altogether ca. 60,000 symbols.

On the other side, since 2011 the ISO Technical Committee 145 Subcommittee 2 designed and standardized 43 new public information symbols. The complete set of the International Norm ISO 7001 – *Public Information Symbols* is now composed of 122 symbols. The ISO employs no graphic designer, so it is up to the Participant Members to send their symbols for evaluation. Usually Participant Members are National Bodies of Standardization that, like the ISO, employ no graphic designer. The local committees are formed by representatives of the industry, commerce, government and society. They must provide the original symbols.

These procedures are outdated and characterized by slowness, opacity and inefficiency. This situation may be overcome through the adoption of innovative processes like collaborative transformation.

Conclusion

One cannot say that the ISO does not recognize the necessity of collaboration within the standardization process. Barry Gray, the ISO Technical Committee 145's convenor, stated the following in a 2013 interview:

> [In graphical symbol standardization] you are trying to find the thing that communicates most clearly to the majority of people. It is a laborious process, but that equally is good in one way because what it means is that we do involve people beyond their own committee members. (...) We don't cover everything in our committee. We haven't got knowledge of every aspect of the world, but people out there do. And so they can contribute to it. (Barry Gray *in* Peckham 2013: 07'42"-08'29")

It was assumed here that the adoption of collaborative transformation processes in public information symbol design as an essential stage in the general procedure of graphical symbol standardization should improve design innovation, comprehensiveness and social acceptance of the resulting standardized symbols.

But as Rudolf Modley, an american follower of Otto Neurath Isotype principles, once said: “The road to universal symbols seems difficult. It is so because the factors which will determine success or failure are not only questions of quality and technical competence but also questions of politics and of organization” (Modley 1970: 6).

Marcel Pauluk is Professor of Semiotics and Graphic Design Theory in the Department of Design at the University of Paraná (UFPR), Brazil, chair of the Brazilian Commission on Graphical Symbols (ABNT/CEE-168) and member of the ISO Technical Committee on Graphical Symbols (ISO/TC-145).



Airport Processes
at the Berlin Brandenburg Airport

Schlaich Sibylle and Nehl Heike
Moniteurs, Berlin - Germany

Airports are complex buildings with various ongoing processes. Since 2005 Moniteurs has been working for the Berlin Brandenburg Airport as information designers, developing the signage concept and numerous explanatory plans and maps for different target groups. Although the airport did not open 2012, Moniteurs is continuously commissioned with information design issues like time data, detailed explaining of ways for specific passengers, the further developing of the pictogram family up to icons for the different working passes. A new challenge engaging airport authorities all over the world is the fact of growing numbers of passengers in terms of minimizing the queuing times and distribution of passengers at the security lines. Related to this, we would like to do a presentation of our analysis of possibilities for dynamic information due to extended security lines.

2009

Nach der Schließung vom Flughafen Tempelhof

TXL 14.18 Millionen

THF 0 Millionen

SXF 6.80 Millionen

21 Mio PAX pro Jahr

Monitpurs



Manitgurs


Check-in
111–116
1
Abflug
Departure
Check-in
0
Check-in
1–9
2
2
Check-in
211–216
2

Manitours





Manitgurs



ADV



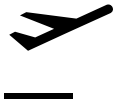
München



New Delhi



ISO 7001



Tokio
Haneda



Transit



London
Heathrow



Amsterdam
Schiphol



Köln Bonn



BBI



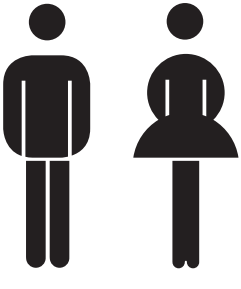
1968 ADV

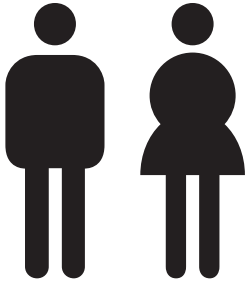


1974 AIGA









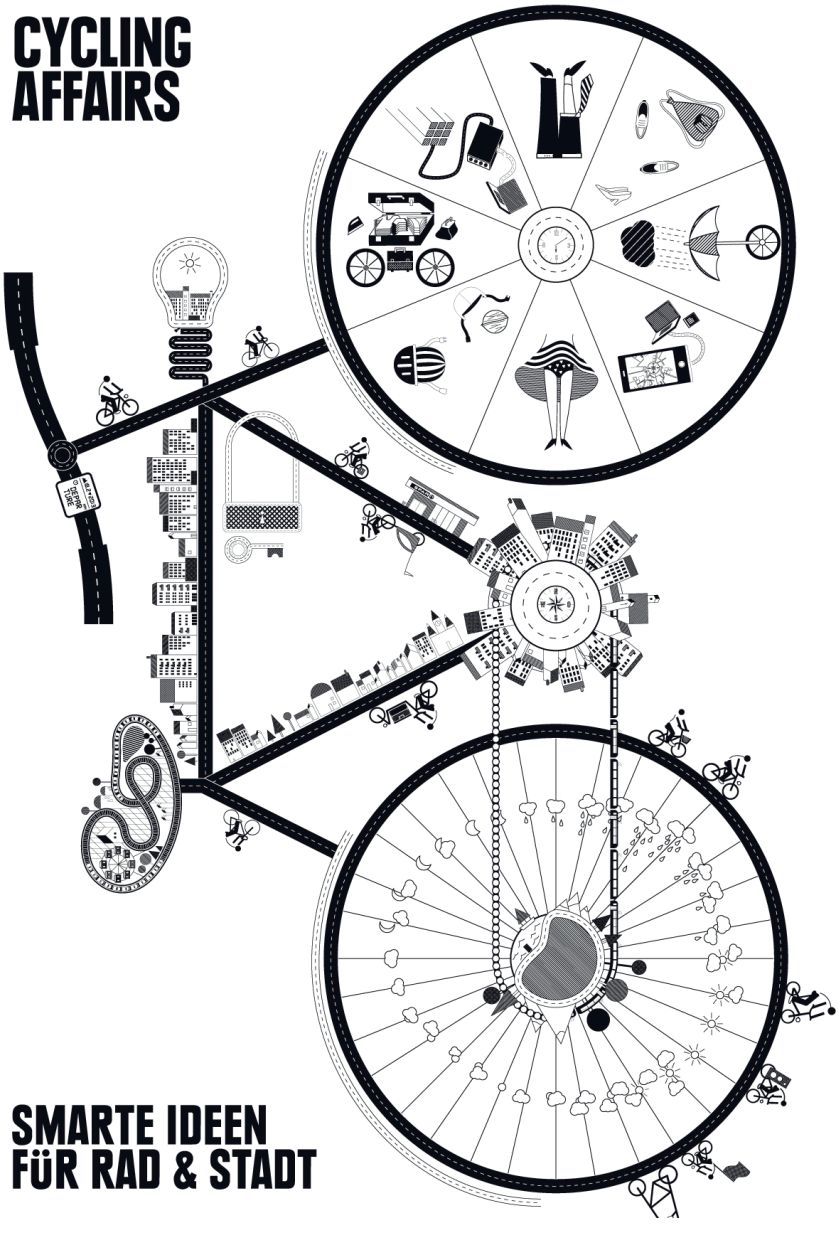


Neurath News

Bauer Erwin K.
buero bauer, Vienna - Austria

Neurath's legacy is transformed into all kinds of different media and applications nowadays. Not always taken literally, his strategies are implemented in playful and often interactive ways today. Reacting to socially, economically and ecologically relevant issues his educational claim finds widespread practice in design.
Selected projects show different approaches to modern information design. Located on the hotspot and interface between spatial and visual communication, buero bauer will be giving insight into their user centred work from vivid exhibition design to social data visualization and inclusive orientation systems. They all show how small modifications can give simple things a big meaning with illustrative character.

CYCLING AFFAIRS



SMARTE IDEEN FÜR RAD & STADT







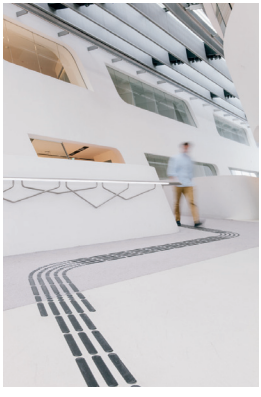




University Clinics Salzburg / Paediatric Clinic




Ebene
Level
6
Zone 5b, 5a
Projekträume 5.004 – 5.293
Stilles Lernen
Zone 6a
Projekträume 6.002 – 6.010
Stilles Lernen
Ausgang
Zone 6b
Projekträume 6.162 – 6.170
Zone 6b
Projekträum 6.203
Zone 5b, 5a
Project rooms 5.004 – 5.293
Quiet room
Zone 6a
Project rooms 6.002 – 6.010
Quiet room
Exit
Zone 6b
Project rooms 6.162 – 6.170
Zone 6b
Project room 6.203








Project rooms 5.004 – 5.293
Quiet room
Project rooms 4.002 – 4.237
Mondi Newslounge
Communicative stu



Pictograms featuring Japanese hospitality "O-MO-TE-NA-SHI"

Koyama Keiichi
i-Design inc. Tokyo - Japan

The 1964 Tokyo Olympic games were the first challenge to establish graphic communication in practical use of International system of typographic symbols created by Japanese designers who were inspired with design language development by Otto Neurath. Japanese legible symbol system was highly appreciated across the country and the achivements have been relayed just like the Olympic torch till now.
After 50 years we are now challenging again to establish new visual languages which transform Japanese unique traditions and accustoms, such as "Hotsprings" and "Take off your shoes", to legible symbols as a useful communication tool.
In this opportunity I would like to present our challenge to express Japanese hospitality "O-MO-TE-NA-SHI" mind using pictograms based upon ISO comprehension test method which will avoid intercultural difficulties for foreign visitors, and which will anticipate the coming 2020 Tokyo Olympic games' Graphical symbol development.
I also would like to present the current situation on ISO/TC 145/SC 1 Public information symbols if there is no one to participate this subject.

Pictograms featuring Japanese hospitality

“O-MO-TE-NA-SHI”



Keiichi Koyama

iDesign inc.

Contents

Part 1
- Necessity bring out Development
  from Olympic games to Japanese Standard

Part 2
- Expression of Japanese safety and hospitality

Part 3
- Graphical symbols Comprehension test

Conclusion

Necessity bring out Development

1970 Sapporo Olympic Games to 1972 Munich Olympic Games





Japan creates the vocabulary , then Germany create its grammar.

Necessity bring out Development

Unification of major airport signs in 1960s





Expression of Japanese safety

2007: Safety evacuation area symbols /for heavy rain



Flood



Levee



Safety evacuation
Shelter





Niigata, Fukushima heavy rain disaster in 2006

Expression of Japanese safety & hospitality

2008: Priority Symbols



Elderly People



Injured People



Expecting
Mothers



People with
Small Children



Internal
Medical Conditions



Expression of Japanese safety & hospitality

2009: For foreign visitors

Take off your shoes

Communication
with special language

Vegetarian

Hot springs





Expression of Japanese safety & hospitality

2011: For foreign visitors

Convenience
Store

Karaoke

Shoppings

Tourist
Information





Expression of Japanese safety & hospitality

2012: For foreign visitors


Lost Children

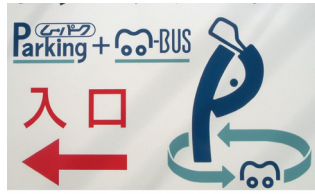


Meeting Point


Park & Ride




Group Gathering Point



Expression of Japanese safety & hospitality

2013: Measures to counteract the falling birthrate


Baby Pram
prototype


2002






Baby Pram
final





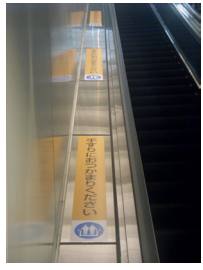


We learned a lot from Winer Linien to solve gender problem.
Neutral gender is required in Japan.

Expression of Japanese safety & hospitality

2014: Measures to counteract super aging society

Two in Low







Praying Room

Sign Language Available

Writing Board

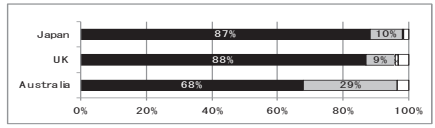
For our safety, "not walk on the escalator" campaign started since 2013.



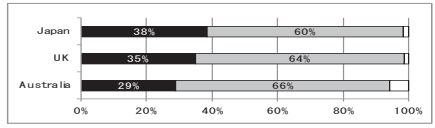
Outline of ISO/TC 145 Comprehension Test

Test results examples

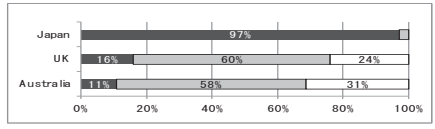
Communication



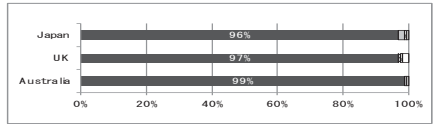
Rental bicycle



Hot springs



Take off your shoes



Outline of ISO/TC 145 Comprehension Test

ISO 9186- 1 Comprehension test sheets

<Instruction>

これからお見せするいくつかの図記号（ピクトグラム）の評価について、ご協力をお願いします。

ご注意
・調査の目的は図記号を評価することにあります。あなたの知識や見え方を評価するものではないので、お分かりになる範囲でお答え下さい。

・回答はお一人でお願いします。どなたにも相談しないで下さい。

・時間制限はありませんが、それぞれの回答にあまり時間をかけないでください。

では、まずあなた自身についてお尋ねします。

続く→

<Respondent self-report sheet>

①回答日　　年　月　日

②記入都道府県

③年齢グループ
☐15-30 歳　☐31-50 歳　☐51 歳以上

④性別
☐男性　☐女性

⑤教育レベル
☐中卒　☐高校卒　☐大卒以上

次に、回答例をご覧ください。
続く→

<Example sheet>

回答例

あなたは駅やデパートなどの街中の建物に入り、次の図形を見つけました。



1. あなたは、この図形は何を意味すると思いますか？

エレベーター

<Test page>

あなたは駅や街中または観光地などで、次のサインを見つけました。



1. あなたは、この図形は何を意味すると思いますか？

Rental bicycle

What's hot for the coming future?



Kindness



Japanese foods



Four seasons/Tourism



Hot springs



Traditional buildings



Punctuality/Safety



Japanese products



Japanese culture



Sub-culture

Short Stories

JOSE Teena

WANG Yuh-Chen (Victoria)

BORGENHEIMER Lisa

URBAN Nicole



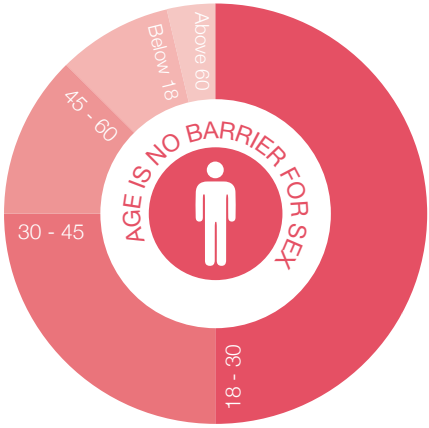
Crime against women in India

Jose Teena
University Creative Arts Epsom - UK

One of the biggest problems the world is facing today is Crime Against Women. Rape has become one of India´s most common crimes. The horrific gang rape and murder of a 23-year-old in Delhi, the national capital, late last year is a case in point. Despite being among the safest city for women, Mumbai also witnessed the gang rape of a photojournalist recently. The attacks led to so much outrage in India as people expressed their anger against the horrendous acts against women. People participated in candle light protests, campaigns and even filed online petitions like change.org to show their support towards victims and their anger against these crimes. Having worked with design firms in India and the kind of projects I have come across and interacting with people from similar background and discussing different kind of projects, somewhere down the line I began to built an interest in social design. I started to believe that my designs need to bring positive changes to people's life. This paper will take you through my M.A research and the final outcome of the project, which will be a tool kit designed on gender study, that needs to be included in the Indian school curriculum to bring equality among boys and girls.

Research

My research helped me gain invaluable insights into the current situation of India in terms of crime against women (rape), and cultural issues like gender discrimination and difference between rural and urban India. A deeper understanding of the topic helped me to conclude my research with a focus point to take the project forward to solve the current issue.



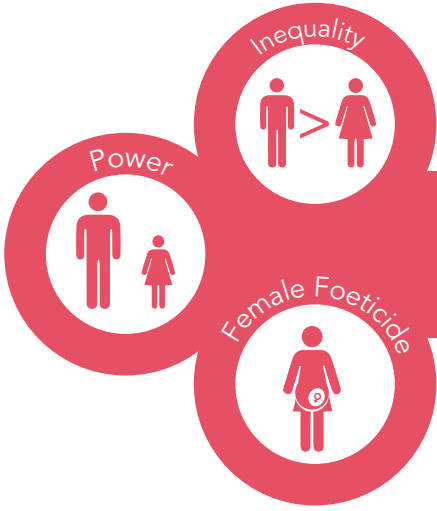
Rape being a constant issue in India, one question that has been asked by everyone, why does this keep happening? It is always assumed that there are answers on how to prevent rape. According to the Indian culture and mentality of the people, it is said that women should have stuck to safety rules and nothing would have happened. On the otherside there are few who says she is doing this for money. Its always the victim who are questioned and judged around rape and the rapist is never have to go through any of these.

India's gender ratio, has distorted due to the practice of sex selective abortion, the craving for baby boys .As a result India has 37 million more men than women, as of 2011 census data, and about 17 million excess men in the age group that commits most crimes, up from 7 million in 1991. Violent Crime in India rose by 19% from 2007 to 2011 where kidnapping of women, mainly for forced marriage, has increased by 74% in that time. Shortage of marriageable women results in rape committed by young unmarried men.

Characteristics of these young men are easily predicted. They mostly come from lower socio-economic classes, mostly un- or under employed and lead a nomadic lifestyle. They are constantly frustrated due to financial issues and generally live and socialize with other bachelors. In sum, these males may be considered as failures by the society. These men generally hang out together and support each other's wrong choices. When left together, they turn out to be a tool for social disorder. Together they take huge risks and become more violent than they would be individually.

India's total sex ratio — defined as the number of females per 1,000 males — has increased over the past 20 years, after dropping for 80 years before that. As of 2011, there were 940 Indian women for every 1,000 men, up from 933 in 2001. As per the study estimates, there will be about 30 million extra men in India between the age of 15 and 35. As per all these reports the number of female children relative to male children are expected to remain low. Unless there isn't an end to sex – selective abortion, much won't change. (Trivedi,2013)

According to the 2011 crime statistics in India, of all the people arrested for rape crimes, almost 60 percent were men between the ages of 18 to 30 years and nearly 30 percent were men between the ages of 30 to 45 years.



FEMALE FOETICIDE

Female Foeticide is the act of aborting a foetus because it's female. This is one of the major social problems in Indian culture. If not aborted in the womb, the baby girls are killed after birth, which leads to horrifying skewed sex ratio. Child marriage and and infanticide makes India one amongst the worse country for women. Female foeticide is one of the major reasons for rape in India.

INEQUALITY AND POWER

Gender equality means that males and females have equal opportunities to realize their full human rights and contribute to and benefit from economic, social, cultural, and political development.

REASONS FOR RAPE

There has been a good improvement in gender equality in India in the past year but economic opportunity and facilities and rights for women make India still the poorest in South Asia.

Gender discrimination is one of the biggest problem within the Indian society. The culture is in such a way that women are considered secondary within the household and workplace. This affects women's health, education, financial status etc. Women are mostly married at a young age and are enforced domestic responsibilities. They are typically the last member in the family who gets any sort of attention, including receiving proper medical care. According to the census data's only 54 percent of Indian women are literate, compared to 76 percent of men. All these make it difficult for women to establish their own security.

Education lacks quality. It lacks teachers, books and learning materials. Every village is not provided with schools. Hence they need to go to nearby villages to educate themselves but most of the girls are stopped by their parents hence this becomes a reason for the failure of education in rural India. Even though government schools exist the standard of education is poor compared to private schools. Most of the people living in villages are aware of the importance of education and that's the only way to get rid of poverty. Due to lack of money they don't have a choice but depend on government schools. Provided with enough schools and committed teachers it is still possible to bring changes in educating people the right way. The textbooks mostly being in English and the people in rural India speaking their regional language or Hindi, do not learn from the provided textbooks, defeating the purpose. Hence they lose interest in studies.

This leaves me with considering literacy level or standard of education in rural India being one of the reasons for the increase in number of rape incidents. Quality of the education is even worse than poverty. The children are not taught to think but to memorize previously defined questions for their exams. Hence the priority becomes just passing the examination rather than gaining knowledge. Which means students don't bother to study, and this leads to decline in their standard or level of education.





THE MORE RURAL THE AREA THE LESSER THE LITERACY, AS A RESULT RAPE AWARENESS CAMPAIGNS SEEM TO BE LESS EFFECTIVE.



To bring changes in attitudes and stop women feeling unsafe every time they leave their homes, India needs a mindset revolution. It is not possible to change the mindset of already corrupted people. However the change has to be from the grass root level. Children are our future and hence showing them the right path would be easily adaptable and acceptable to their innocent minds. Gender study should be part of the school curriculum.



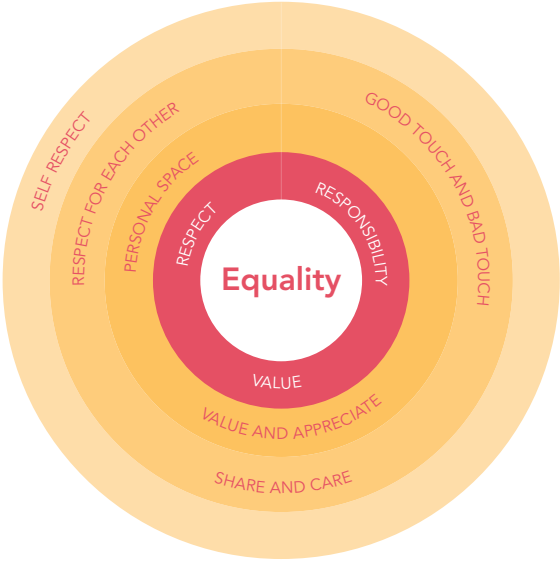
There is a need to work on education by promoting healthy and non-predatory relationship between boys and girls. Children should be taught how to respect each other and treat each one with equal respect and importance. The mentality of people in Indian culture needs to change. Both men and women are equally responsible for each other. Children need to be taught that each person's body is their own property and no one has the right to do anything without their permission.

Design development

After a thorough research and on the basis of feedback from the interviews conducted with teachers, I started to put things together to find a design solution to the problem.

My target audience being children and taking their age into consideration, and the need for gender study in schools, I thought the idea of a lesson plan or a tool kit would be ideal.

What is important is that this tool kit on gender study should bring equality among children at a younger age, as India is discriminative about its gender.



After a detailed brainstorming session, I realized that the content of the toolkit should talk about equality in every perspective. Hence, with EQUALITY as the center point, I divided the toolkit into three parts: RESPECT, RESPONSIBILY and VALUE, trying to directly relate these points to the current issues or culture of India.

These three points were further divided:

Respect: Self respect, respect for each other and personal space. In India, girls are not valued. There are many instances where they are killed in the womb itself. Hence they don't realize their own importance. They get beaten up but do nothing about their rights. They lose their ability to aspire. Hence there is a need to educate them. A girl child needs to know that she is an equal person and needs to be taught to live like an equal person.

Responsibility: Being responsible for one's action (good touch and bad touch). This is important in a country where even a 6-year-old was raped in a school by the staff members.

Value: Value and Appreciate, Share and Care. In context of the cultural discrimination, boys in the family play and study while the girls are expected to do household chores and are married off at a young age. Women are usually the last members in the family who gets any sort of attention, including proper medical care.

FINAL DESIGN

IDENTITY

The tool kit content is all about Equality in every perspective. Hence it was important to give it an identity that conveyed the message right. As I was looking for a name and an Identity for the tool kit, I realized it should be something that had same meaning in more than one language. Hence the toolkit was branded by the name SAMANATA which means equality in Hindi and most of the regional languages of India. Since the name itself says all about the tool kit content there was no need for a logo symbol. The logotype was crafted to be soft and playful as I was targeting the children and the school environment. However I made sure that it was bold and serious enough without losing the values of the content inside.











TOOL KIT

The complete toolkit was designed in the form of a square board game box with posters, visual cards, stamps, colour pencils etc. that were required to make the activity interesting and fun for the kids. The graphic style was kept realistic and simple to make sure that it doesn't overpower the actual content which was meant to be informative. The toolkit also has a user guide for teachers, which is useful to conduct the sessions. The brand colour chosen was yellow which has its characteristics of being friendly, happy, childish and communicative. The secondary colour chosen was a shade of pink as it indicates love and care.







Using the Taiwanese Farmers' calendar´

Wang Yuh-Chen (Victoria)
University Creative Arts Epsom - UK

… to introduce aspects of Taiwanese history and culture to an audience of European museum visitors Taiwanese history and culture to an audience of European museum visitors
This paper will show how the presentation of history can be enlivened in a museum context, focusing on the history and culture of Taiwan relayed through the vehicle of the Taiwanese Farmers' calendar. Taiwan has two kinds of calendar: the Gregorian calendar (as used in the west) and the ´Taiwanese Farmers' calendar´ which incorporates the Gregorian calendar but is in essence a local calendar for Taiwanese people to highlight festivals and important celebratory days. To a western eye it is impenetrable and exotic, which gives it an added fascination to those unfamiliar with this everyday Taiwanese item. The ´Taiwanese Farmers' calendar´ identifies good and bad days to hold significant events. It is devised by the Day choosing Teller (a kind of Fortune-Teller), who decides on the best and worst days of the year to hold important events such as weddings, open a business, build a house or go fishing. This in turn has a big effect on the Taiwanese economy and society in general, which is the reason why the calendar is such an effective vehicle to describe Taiwanese society to a western audience in a museum context, using touch screen technology to reveal layers of meaning.

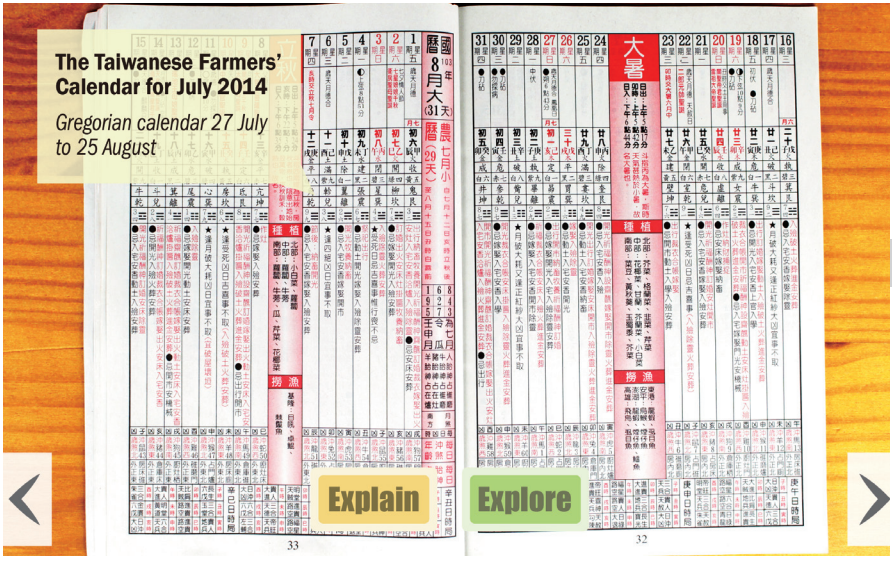
Using the Taiwanese Farmers' Calendar to introduce aspects of Taiwanese history and culture to EU people

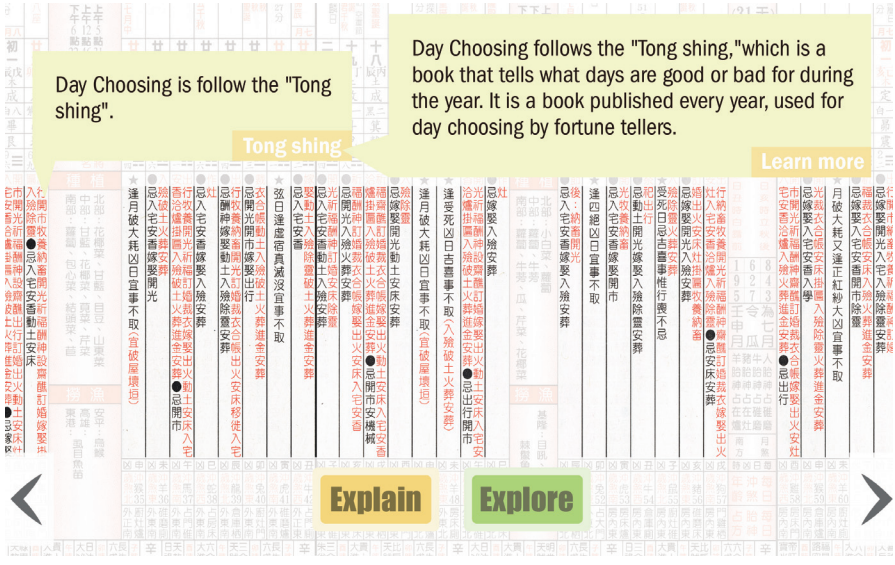
Yuh-Chen Wang
University for the Creative Arts,
Epsom, UK



The Taiwanese Farmers' Calendar for July 2014

Gregorian calendar 27 July to 25 August




Day Choosing is follow the "Tong shing".
Day Choosing follows the "Tong shing,"which is a book that tells what days are good or bad for during the year. It is a book published every year, used for day choosing by fortune tellers.
Tong shing
Learn more
Explain
Explore

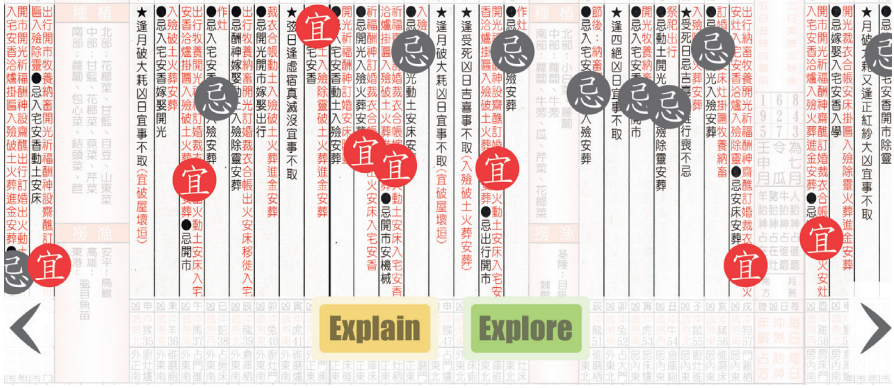

Good days to get married
What's special in July?
Explain
Explore

What is a good day to get married?

Press the buttons to find out

宜 Good day – red is a lucky colour

忌 Bad day – grey is an unlucky colour





Ghost Festival

15 July is the Ghost Festival. On this day all temples, all families, companies, governments, and hospitals...etc. will offer food and gold paper money to ghosts. People hope ghosts won't do any thing bad to them, and hope they can bring some good luck.

Facts

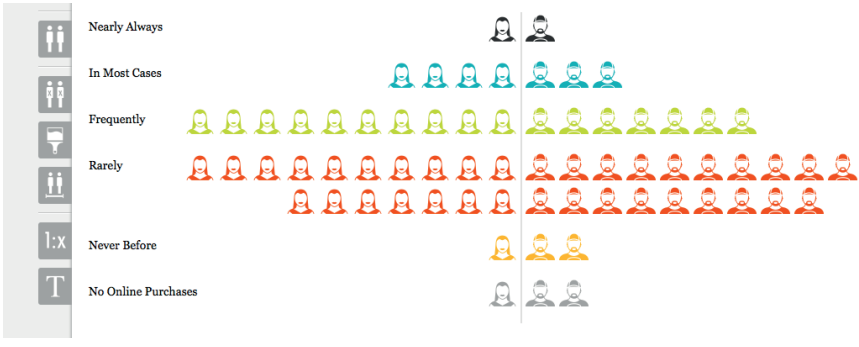
Company offer food for ghosts, at the Ghost Festival.

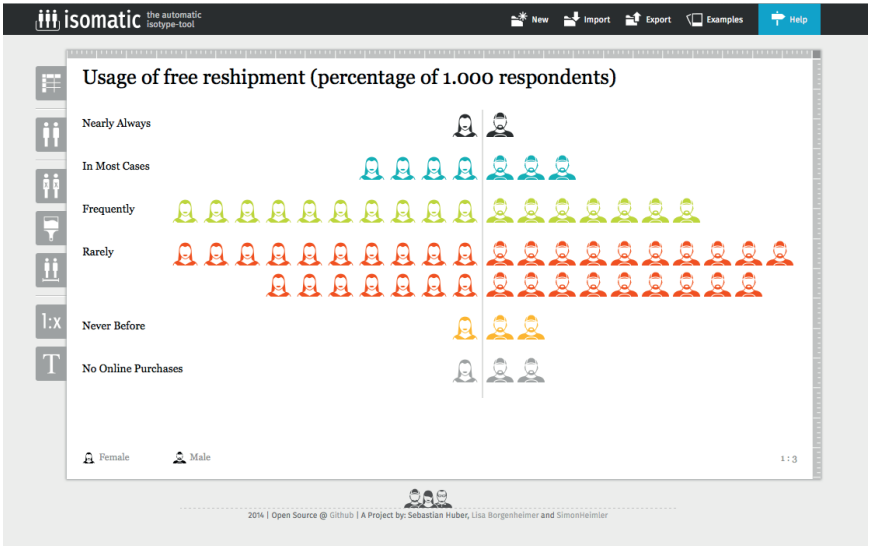


An Online Isotype Generator

Borgenheimer Lisa & Sebastian Huber
Hochschule Augsburg – Germany

Tired of creating isotype graphics manually? We´ve created a web application (www.isomatic.de) that does all the heavy lifting for you and still leaves you with the opportunity to customize it in your favorite vector graphics editor like Adobe Illustrator. You start by importing your data via copy´n´paste from a spreadsheet application, like Excel or Numbers. The application gives you the choice between several isotype layouts. A broad library contains many custom designed icons and many options to layout and design the graphic. If you seek help, the interactive tour will guide you throughout the whole process. We started this project in 2013 as students of the University of Applied Sciences in Augsburg and released it as OpenSource.

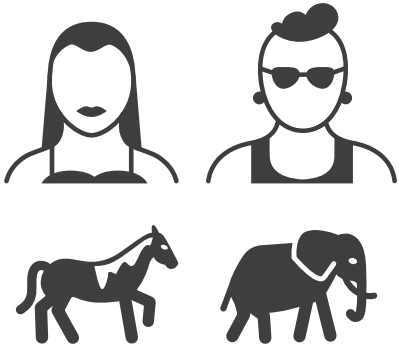

Nearly Always
In Most Cases
Frequently
Rarely
Never Before
No Online Purchases



isomatic the automatic isotype-tool

Creating isotype graphics manually can be a long and tiresome process. To our knowledge there aren't any existing tools available which can automate this work. When developing the concept of isomatic we had no other existing similar tools or libraries we could rely on. We had to think through the whole process and build the application from ground up. Soon we realized, that there are a lot of variables and usecases to consider. Therefore we needed not only to create a very specialized application but also a flexible one.

By developing an open source web application, every operating system with a modern browser and internet connection can be supported. Switching between several programming syntaxes is usually an error source. For that reason we are only using JavaScript which enables us to work with several libraries, frameworks and tools to optimize and accelerate the complex "isomatic" project.

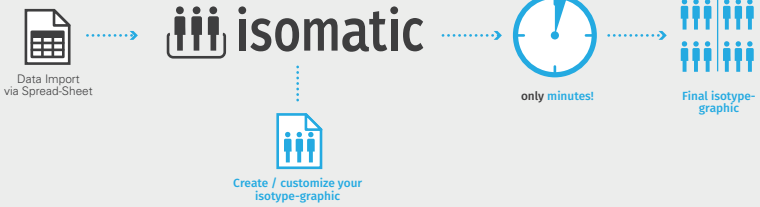


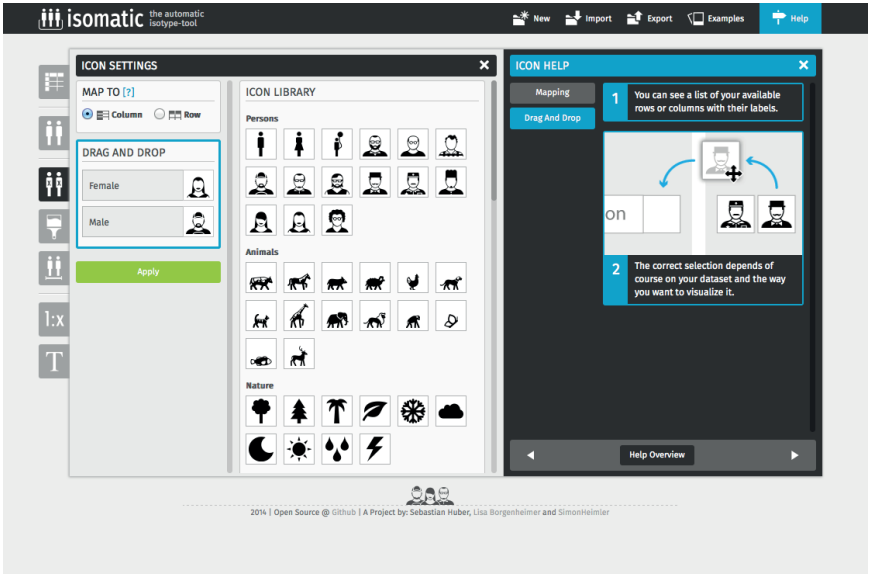
The building workflow begins by calling the website and copy and paste your data from a spreadsheet application, like Excel or Numbers directly into isomatic. A simple preview table is displayed after the program has processed the imported data.

isomatic supports three basic layouts: the Normal-mode, which shows the icons in a simple line, the Compare-mode to show data from different categories or the Versus Mode to compare two data-sets aligned on the middle line.

The most impressive thing of isotype-graphics is the usage of various icons to visualize a specific topic. So we created an icon library which contains a growing selection of icons for many themes. The icons can simply placed in the designated field per drag and drop.

Inspired by Otto Neurath and Gerd Arntz, we designed a fixed icon grid for human appearances. Specific components, like hair or beard, were created, to give them individual characteristics. The icon style in isomatic is consistent and has to be our signature feature.



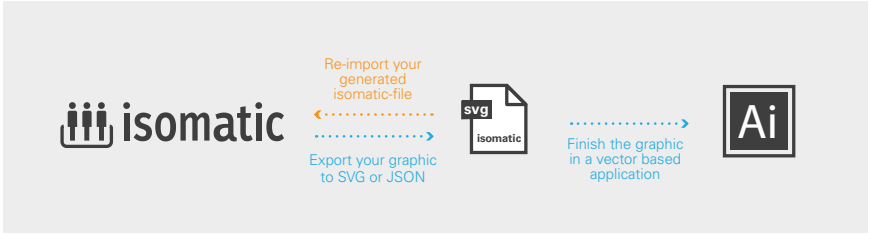


Some default colorpalettes are provided to fill the icons with. By selecting a palette, all categories of you data set are automatically colored. If there is a need to modify the filling, every color can be changed with the integrated colorpicker. Due to the missing support of the CMYK color model within the web environment we can only offer the RGB color model.

In spite of many automatisms in the background, some calculations can't be made by the program alone. Therefor it is possible, respectively necessary, to adjust the given icon pattern by changing the margin of the icons, colums or rows and modifying the icon size.

The scale is initially calculated and defines how accurate your dataset will be visualized on the canvas. By enabling the "Round Size" checkbox, the last icon will be scaled according to the remainding value for increased accuracy of the infographic.

There are a lot of options, adjustments and possibilities within our application. So there is an interactive help which guides you through the whole process. The help is directly linked to the user interface and highlights the isomatic-adjustment which is currently explained in the help text.



As isomatic only works with vector based images, the whole diagram can be exported as a single SVG file. With that comes the possibility of embedding the data and options made with isomatic. The generated isomatic diagram can be further edited by importing the unchanged SVG file into isomatic. All previous options and data are now set in the user interface. By changing and overwriting the generated SVG file outside of isomatic, the embedded data and options are lost and the file can't be imported.

The exported isomatic SVG-file can be opened in a vector based application, like Adobe Illustrator, if some complex design improvement are required. Every single part of the diagram can be moved, scaled and colored like every other vector graphic element.

We've reached a relative feature complete and stable project state and released it at **www.isomatic.de**. In the near future we will expand the number of custom designed icons in the icon library. There are explicit plans to develop an icon generator which will allow the creation of personal and individual icons based on the icon grid of isomatics icon library.



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www.isomatic.de

info@isomatic.de

www.github.com/fannon/isomatic



The impact of paper ...

Urban Nicole
Fedrigoni - A

... is bigger than many people can imagine. Paper supports communication in various fields: via haptic, the shade, the color, the format, the structure, the ingredients (fresh fibre, recycled fibres, cotton…), the sustainability, the volume, as well as the weight. Sometimes paper supports the message and sometimes paper is the message itself, without adding words or pictures. Stunning projects will be introduced during the presentation of Fedrigoni Austria, e.g. how students of the technical university of Graz have captured the core messages of stories in paper moments as well as how second skin becomes first skin at one of Germany's premium-segment camera LEICA X2. Paper is everywhere – places you might not imagine. You are welcome to get inspired.


EDITION FEDRIGONI
LEICA
ELMARIT 1:2.8/24 ASPH.
E46 E39
THE
PAPER
SKIN


EDITION FEDRIGONI
LEICA
ELMARIT 1:2.8/24 ASPH.
E46/E37

Visualization

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The use and production of time representation

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The use and production of time representation
Design as a reflect of the world has changed. Transformers are nowadays more important than ever, manage the enormous amount of data and translate to every days users requires more than artistic skills, requires a way of thinking and the understand of the social role and responsibilities that designers should have. The Isotype movement starts and create its own rules, as pointed by Twyman (1975) they think things by themselves. As designer, lecturer and researcher, some of my experience in pictorial information reveals that very often designers mislead the representational idea of a concept or object from the users, because, due to their specialized training, graphic designers tend to assume that their artifacts are understood by all users in as much as they can be understood by the creative community to which they belong. However, at the process of production of communicational graphic artifacts, we believe that graphic conventions, reading directions, and representational choices (Miranda, 2013) are directly related to the understanding and therefore require a meeting point between producers and users. In a experimental research about time representation in a narrative sequence with French and Brazilian design students, our data shows that drawings from children and non-specialists adults (without specialization in picture production) are more useful that designers drawings. One of the explanations of this is that during their time at universities and schools, designers are still being more impacted by having an own style, originality and in someway, innovation ; and less by repetition, standardization and rationalization of symbols for international use.



use and production of time representation

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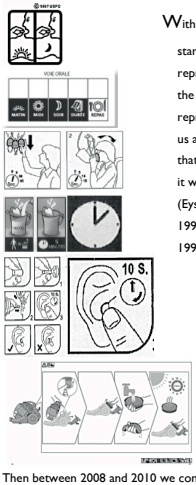


With the objectif to investigate time we started by collecting that already exist representations. The result showed us the main problems with this kind of representation but didnt' enlightening us about why the designers proposed that way of representing time and why it was difficult to users to understand (Eysenck, 1988 ; Lowe, 1993 ; Wright, 1999 ; Sadoski, 1999 ; Wogalter et al. 1997).

Then between 2008 and 2010 we conducted an experiment that consisted in asking 40 participants in France to produce visual information.

The narrative was the same during the 4 drawing sessions :

'Yesterday was the birthday of Thomas.

Today he plays with his toys while his mother prepares breakfast.

They are both waiting eagerly Thomas's father and brother arrival tomorrow.'

Articulating notions of time such as, yesterday - today - while - wait - tomorrow, the content should be dedicated to children and adults. The idea was give the opportunity to participants to do their first draw, and then to think about their first strategy in order to improve it in terms of visual communication. The sessions were video-recorded, when a participant had finished, he explained his drawing to the camera. The feedbacks were video-recorded and we collected 160 productions.

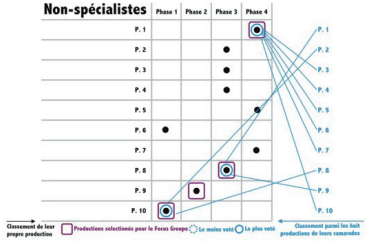
The instruction was to draw for someone else who didn't know the narrative. Our aim was working with these three groups to observe the strategies that adults (specialist or not) and children can apply to communicate basically by drawing, even if the use of text was allowed.

After the production phase, with 160 drawings in our hands and the idea of a focus group, we had to find a way to reduce this total. We decided to establish a ranking phase by the producers.

First, each participant chose **one of his four productions** based on the criteria: (1) represents better the narrative ; (2) describes it more precisely and (3) is more comprehensible..

Second, each selected drawing was presented to the group, they had the possibility to **choose just one or to rank them.**

The drawings were selected within each group, without crossovers. After these phases, we finished with 16 drawings.



Critères recommandés:
- Représente le mieux l'histoire
- Décrit plus pertinemment
- Plus compréhensible

Critères des participants:
- P. 1 Qualité du dessin
- P. 2 Qualité du dessin
- P. 3 Compréhension
- P. 4 Représente le mieux l'histoire
- P. 5 Plus claire aux moins claire
- P. 6 Le plus aimé
- P. 7 Préférence
- P. 8 Du moins bon au meilleur
- P. 9 Préférence
- P. 10 Du moins bon au meilleur

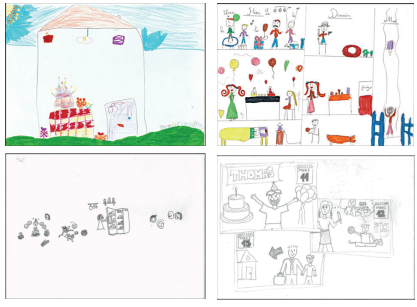
The participants selected for the focus group were : (1) Participants specialists - produce and read visual information - 12 Design students in their last B.A year and (2) Participants non-specialists - read visual information only - 12 Tourism students in their last B.A year.

Finally, we composed four sub-groups of three with specialists and the same with the non-specialists. Each panel was composed of **three participants reading four drawings** (one from each drawing

session).

The panels will be present obeying to the same order all along, first in the top left Lille Children, second in the top right Parisian Children, third in the bottom left Specialists drawing and fourth in the bottom right Non-specialists drawing.

:: Panel 1



Results of Specialists - Group 1

> Not having understood the three time dimensions, they identified only the present and the future.

> Characters identified were the mother, the father and Thomas, the brother was too much alike Thomas and was not noticed.

> Through the diagram we can observe the parties identified in the narrative.



Results of Non-specialists – Group 1

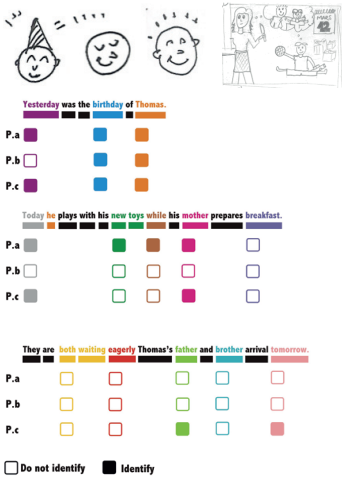
> These participants had a lot of difficulties regarding onomatopoeia and balloons, not knowing how to understand the function.

> The character of the brother was not recognized because it had not enough discrepancy to the character of Thomas.

> The question of the arrival or departure of the father was difficult to them, even if for us it was very clear due to the arrows pointing that they

were returning.

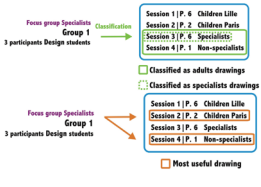
> Looking to the diagram we observe that participants struggled to identify the parts of the narrative and thus to understand the whole, non-specialists had insufficient knowledge of graphics components of a visual narrative.



Results of Specialists – Group 1

> Three of the four drawings, have been properly identified, the drawing made by designers was identified because of the good drawing skills, the line, the mastery of spatial organization and the fact that was very clean.

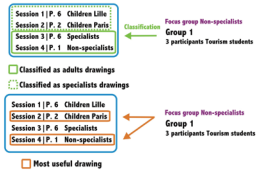
> The drawing considered most useful: was from the children of Paris and the non-specialists.



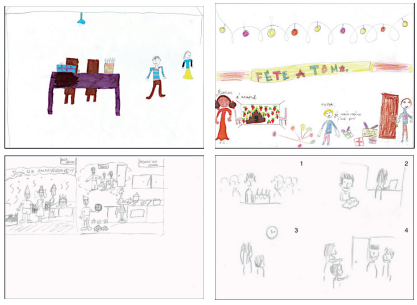
Results of Non-specialists – Group 1

> The drawings have been correctly identified.

> The most useful drawing were those from Parisian children and non-specialists.



:: Panel 2



Results of Specialists – Group 2

> For these participants, all the scenes take place in a same day.

> The comprehension of the characters was also complicated, identifying only Thomas and his mother.

> Simultaneous actions represented in the same graphical space were understood as 'and' and not as 'while'.

> The representation of 'to wait' was seen in Fig. VIII as the characters looking to a watch, but the participants did not noticed.

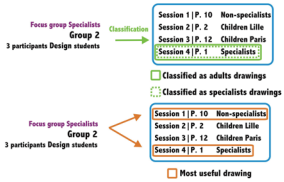
> Reading directions was also perceived problematically, they read 1- 3 / 2 - 4 or 3 - 4 / 1 – 2.





> Concerning the drawing's classification, only the drawing of the specialists was considered.

> Most useful drawings were those of non-specialists and specialists.



Results of Non-specialists – Group 2

> A lot of hesitation / difficulty while reading.

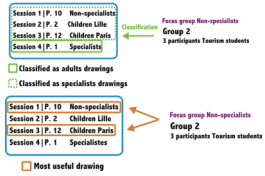


> Assumed that all actions were happening at the same time.

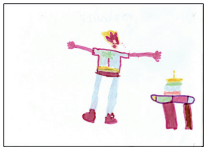
> Concerning the drawing's classification, children and non-specialists were classified as children drawings.

> Specialists drawing was considered as a non-specialists drawing due to the penciled style, regarding the spatial organization the participants considered the producer as if he did not know entirely how to manage spatial issues.

> Drawing more useful were non-specialists and Parisian children. .



:: Panel 3





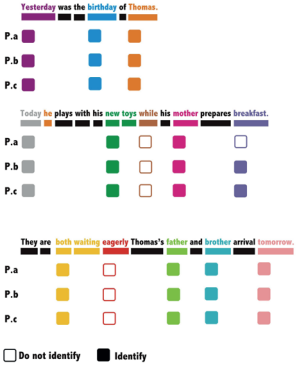




Results of Specialists - Group 3

> Temporal dimensions are correctly identified and characters also.

> Questioning of the function of balloons, apparently not completely understood.



> Drawings were correctly identified.

> The most useful drawings were those from specialists and children Paris.



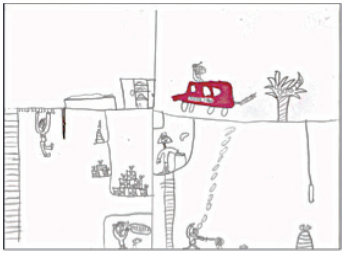


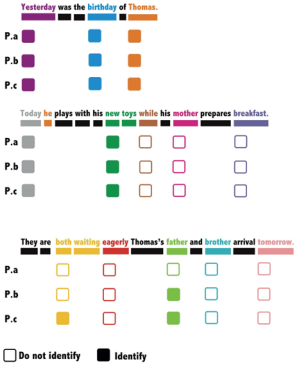
Results of Non-specialists - Group 3

> The reading direction was also complex because the production was problematic.

> In this drawing (below) the left side is just one frame, in the living room there is a mezzanine bed, the producer could not articulate the 3D dimensions and the drawing was read as composed by four frames.

> Only the character of Thomas and partially his father and two temporal dimensions were identified.





> Participant. A classified the drawings from children and specialists as adults drawings and none as a specialist drawing.



> Participant B and C classified as adults drawing the drawings from specialists and non-specialists.



> The most useful drawings were from the Parisian children and specialists.



:: Panel 4



Resulsts of Specialists – Group 4

> Identification of a single temporal dimension.

> Characters identified were mother, Thomas and father.



> Drawings were correctly identified.

> Drawings most useful were specialists and non-specialists.





Results of Non-specialists – Group 4

> For them all actions are happening at the same time.

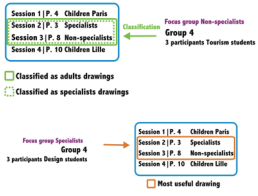
> Characters - Thomas mother, father.

> Identification of simultaneous actions.



> Drawings classified as adults and specialists were non-specialists and specialists.

> Drawing more useful was non-specialists.



:: Conclusion

> If we look at all the focus group sessions, the most useful drawings were those of **non-specialists** / **Parisian children** / and specialists.

> Specialists' drawings were very concise but the graphics elements used were not understood by the non-specialists readers. This group had a very artistic approach: focusing on the form /style according to the readers. The drawings as judged by the focus group were not communicative enough. Their stylization was seen as uninformative.

> Non-specialists due to their lack of drawing practice, produced more redundant drawings, using image and text, that can generally, palliate to some defaults like design characters, or spatial organization.

> Reading direction was problematic, even if I (as a designer could understand), but the results showed that designers often minimize the

difficulties of potential users .

> The way to organize the information was also very important, information without a frame (flying) were more difficult to understand.

>The use of arrows helped to control the reading direction, but the use of onomatopoeias and balloons created some problems regarding the function, and as a consequence problems in understanding the actions (speaking, thinking, imagining).

> Simultaneous actions are understood as if Thomas plays **and** his mother cooks 'and not as' Thomas plays **while** his mother cooks'.

> The temporal dimensions are poorly understood; most of the actions take place at the same time, except when the text indicated that there was more than one day in the narrative. This also applies to other abstract concepts such as 'to wait'.

> The ways to interpret the drawings by the focus groups participants were also different. Specialists had a much easier reading.

> After each drawing session, the participants explained their drawing to us, and this tool supported us about how participants think of their own production, our interest was especially in the designers. They assumed that if other designers and the creative visual community that they belong to understood what they are doing, it shows that what they do is understandable by others from different communities like lawyers, musicians, sociologists, etc.

> Sometimes, even I could not understand their drawings in the light of the narrative, because there were some parts missing. They explained to me that a designer should not represent the whole narrative, but should find

one element strong enough to deliver the complete information, that explained some of illustrational drawings produced in our experiment by the designers group; these drawings were eliminated after by the group in the ranking phase.

> We observed that designers are less inclined to rethinking their strategies: they usually go from the session 1 until the session 4 by changing minor details and keeping the same headlines. In opposition to children and non-specialists who explored different ways of representing the narrative even if they agreed that some of their strategies compromised the understanding by the user.

> The reading process of non-specialists participants is spread with obstructions. When they aren't unable to understand the information, they take two paths, a) they associate the information with a close referent (e.g. apple with orange) or b) they skip the problematic part of the narrative, moving from A to C without going through B, both induce erroneous interpretations.

> Going on the direction of Isotype method and specially Marie Neurath children's book, the transformer or designer must identify the audience capacity concerning some forms of representation and try to reach them on a better and efficient way.

>Even if these results are representative only of our participants, some of their difficulties can help us to improve the ways of display sequential information but also give us some guidelines to design education.



Visualising Value Chains

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University Creative Arts Epsom - UK

This paper describes how transformation can work in a contemporary context, through the formulation of a tool for visually explaining the value chain using language-free explanation methods. It involves the collaboration of a sustainable fashion/business expert and a graphic designer. A key challenge to the efficacy of ethical fashion and textiles in the developing world lies in communicating issues to workers towards the bottom of value chains (garment factory workers, homeworkers, tribal crafts makers or micro entrepreneurs). In many cases, brands, government & NGO programmes are focused on engaging such producers in fashion supply chains, largely women, who may be responsible for key elements in the process of creating value through interpreting design, colour, and technique. Training can often play an important role in both gender and wider social empowerment, and management of funds generated by trading activities often directly supports community and infrastructural development. Communication is often inhibited by two key issues – low or non existent literacy levels or confusion caused by multiple languages in remote tribal areas in developing countries. A workshop to engage craftswomen may include 3 or 4 local languages, an obstacle to the effective delivery of training. ´Visualising Value Chains' aims to develop a visual tool to show what a value chain looks like. It would involve the evolution of pictographic outputs to define methodologies and tools to support businesses, governments and NGO´s active in supporting ethical fashion objectives through research, training and dissemination of value chain information within sustainability and social responsibility programmes.

This paper will describe how transformation can work in a contemporary context by attempting to emulate the original method created by Dr Otto Neurath in Vienna for use at the Gesellschafts- und Wirtschaftsmuseum in Vienna from 1925-34, where a subject expert works with a designer to create pictorial material that an audience can understand. Transformation was developed and extended by Marie Neurath after Otto's death in 1945 in her many books visually explaining complex concepts to children up until the early 1970s. In terms of this project, a particular inspiration has been Marie's work in West Africa in 1955, where she explained the importance of education, voting, health issues, progress and wellbeing to the people of the Western Region using sequential imagery.

The original idea for the project is based around a collaboration pooling the skills, interests and professional networks of Dr Sue Perks (Subject Leader, MA Graphic Design and visual communicator) and Mo Tomaney (Subject Leader MA Fashion & Business and sustainable fashion/business expert) at University of the Creative Arts Epsom, Surrey UK. The aim is to design a tool for visually explaining the value chain to farmers and textile workers using language-free explanation methods.

The Value Chain

A key challenge to the efficacy of ethical fashion and textiles lies in communicating issues and challenges to those actors towards the bottom of value chains (garment factory workers, homeworkers, tribal crafts makers or micro entrepreneurs in the developing world). In many cases, brands, government & NGO programmes are focused on engaging such producers in fashion supply chains, largely women, who, while remote from the markets at the supply, may be responsible for a key element of the process of creating value in the consumer market through interpreting design, colour, and technique in the creation of textile products. Design or technical training can often play an important role in both gender and in wider social empowerment and management of funds generated by trading activities often directly supports community and infrastructural development.

Aims of the project

Communication is often inhibited by two key issues – low or non-existent literacy levels among producers whose technical skills may be well developed; or by the confusion caused by the use of multiple languages in remote tribal areas in some developing countries. A workshop to engage crafts women may draw on a relatively small geographical region, but include 3 or 4 local languages, an obstacle to effective and timely delivery of training or work shopping. ‚Visualising Value Chains' aims to develop a visual tool that can effectively show what a value chain looks like, and what the challenges, limitations and opportunities might look like for an actor in a remote or contained section of that supply chain. It would involve the evolution of pictographic outputs to define methodologies and tools to support businesses, governments and NGO's who are active in "bottom up" development to support ethical fashion objectives through participatory research, training and dissemination of value chain information within sustainability and social responsibility programmes.



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The project is in its very early stages, but both partners are excited by its scope and potential worth. The initial stages and contexts behind the development of this proposed language-free visual tool were presented, consisting of designs for a game comprising a set of square tiles that illustrate the linear development of the value chain from cotton farmer to designer garment, and all the processes which add value along the way. The tiles will be accompanied by a set of cards that show amounts of currency units from 1-10 and 100 to 1000 to illustrate the value that is added at each stage. The game will be facilitated by a workshop co-ordinator who will work with the women attendees, something that they see as an enjoyable day out, paid for by their employers.

In terms of the look and feel of the project, various illustrative styles are being considered, but it is imperative that we understand the right graphic language to respond to the needs of the end user – the women who are involved at the lower end of the value chain. The ultimate aim is to empower and help them achieve a better income and improvements in their standards of living.

From the team's point of view, the project offers potential for consultancy and further development to meet the needs of diverse value chains and sectors through transformation.

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Isotype in contemporary information visualization

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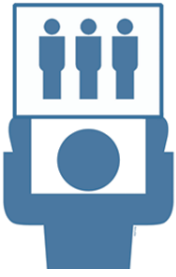
Similar to the contemporary goals of information visualization, that is to to make use of "visual representations of abstract data to amplify cognition" and to enable their users to gain insights (Card, MacKinlay, & Shneiderman, 1999, p. 637), Isotype was developed to visualize statistical data in an intuitive way to the public. Although Isotype inspired the design of modern pictograms and is well known to most information designers, it is not widely applied today. Acknowledging the differences between experts and laypersons in their need for information some major barriers a non-expert audience can meet when dealing with the interpretation of information visualizations are discussed. Isotype is reviewed with respect to its relevance and potential for contemporary information visualization for non-expert users. Possible new media applications of Isotype are presented.



Isotype in contemporary information visualization

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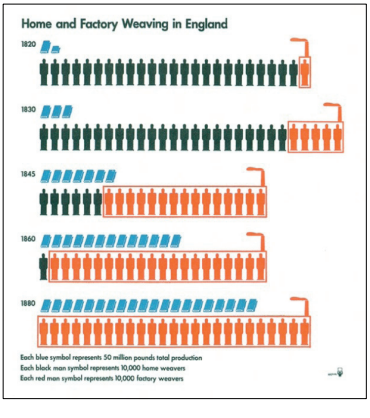
Do you know a company interested in an Isotype project?
⇒ michael.smuc@donau-uni.ac.at, guenther.schreder@donau-uni.ac.at

Looking for an Infodesign-course?
=> florian.halm@donau-uni.ac.at

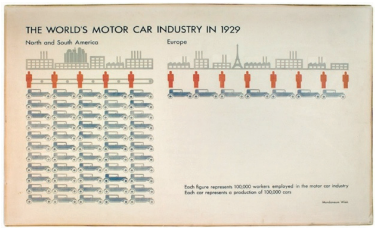
International System Of TYpographic Picture Education

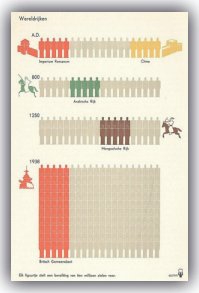


Rules

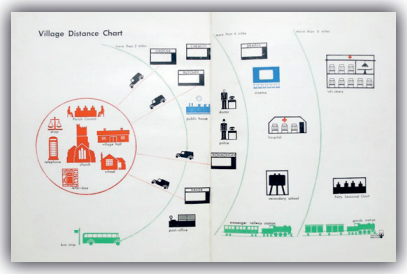
- Consistent use of the same symbols
- Symbols of the same size are repeated according to their frequency
- High resemblance to the object they represent
- Flexibly combinable, e.g. with attributes or other symbols
- Can display frequency, location, history, duration, density, …

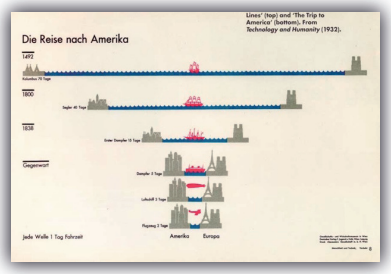
Isotype: Quantitative/proportional Information





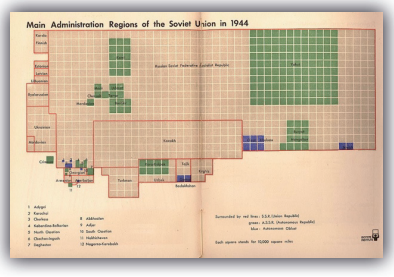
Isotype: Distance & Duration

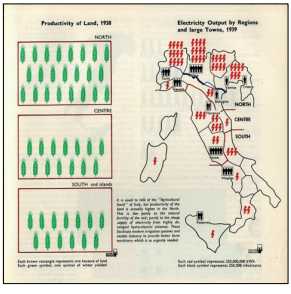




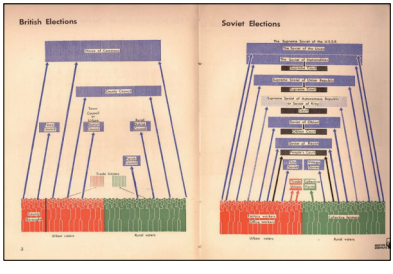
Lines' (top) and 'The Trip to America' (bottom). From *Technology and Humanity* (1932).

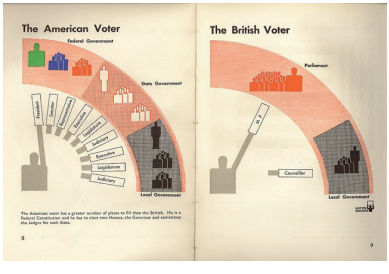
Isotype: Geographical Information & Density





Isotype: Political Systems





Information Visualization

… uses computer-supported, interactive visual representations of abstract data to amplify cognition to enable insights (Card, MacKinlay, & Shneiderman, 1999)

… a chance for communicating complex topics to non-experts?

Advantages of ISOTYPE

Likenesses can be readily recognized, faster understood, and better memorized (Tversky, 2011)

… results in lower cognitive load (Rehkämper, 2011)

… more ressources for deeper levels of processing -> active reception, free opinion formation (Hartmann, 2006)

… triggers reflective thinking, reasoning, and discussion, rather than only communicating facts (Coy, 2006)

Arguments against Isotype



(1) Isotype was not included in research on graph comprehension, though some Isotype rules are supported by their results.

(Brase, 2008; Cleveland & McGill, 1984, 1985; Jansen, 2009)

(2) Otto Neurath‘s work might be rejected due to political reasons.

(Ihara, 2009; Jansen, 2009)

(3) The design paradigm of a low data:ink-ratio contradicts Isotype rules.

(Friel, Curcio, & Bright, 2001; Jansen, 2009; Tufte, 1983)

(4) Visual presentation is preferred by people with lower educational levels.

(O. Neurath, 1933/1994)

(5) Isotype is not implemented in Excel nor in visualization taxonomies.

(Chi, 2000; Rehkämper, 2011)

(6) Isotype has to be learned.

(M. Neurath & Kinross, 2009)

(7) Not all concepts can be represented by symbols adequately.

(Müller & Reautschnig, 2011)

Isotype reborn?



Is this the end?

No, though some aspects are outdated, the basic approach has still potential for information visualization.

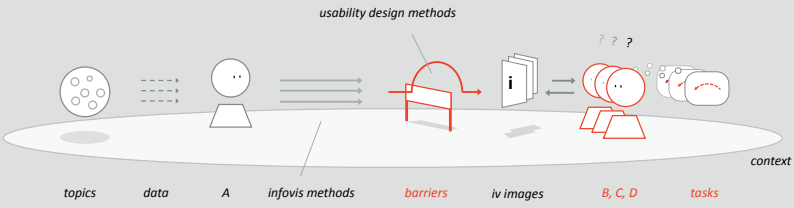
ISOTYPE was intended to educate the broad public and enable them to participate in society.
→ aimed at *non-experts*

Isotype 2.0 = an *interactive* information visualization based on Isotype

- allows users to select statistical data, display them, interact with them and discover relationships
- allows users to generate information visualizations themselves









experts

Motivation



NON-experts
in casual contexts

intrinsic motivation to ...
... explore data
... make sense out of it

... and it's their job!

intrinsic motivation to ....
... learn something new
... utilitarian motives
... want to get entertained

extrinsic motives:
... social pressures
... avoid boredom
... collaborate

Skills, knowledge & insights

high skills and knowledge

actively hunt for insights
=> clear conclusion necessary

skills and domain knowledge vary

„gather" insights
⇒ *also awareness insights are OK*
⇒ *get a feeling for the data*
⇒ *about social life and social situations*
⇒ *reflective insights*

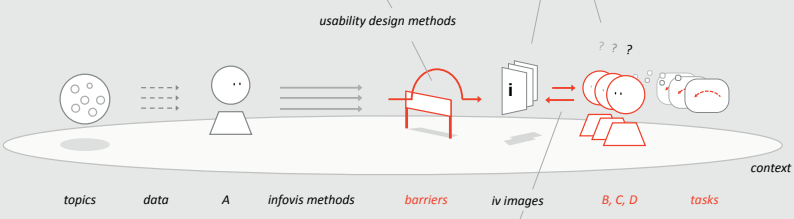
Becoming sufficiently familiar with something is a substitute for understanding it

Isotype 2.0: Some design strategies for casual contexts (Danziger, 2008)



Use User Centered Design Methods
for early and continual focus on users

Involve & entertain the user
aesthetic appeal (to some extent)
narration techniques
affective / contextual cues => deeper processing
less cognitive load



Use modern interaction methods
to reduce complexity and provide cognition support



Conceptualising Transformation

Pedersen Pia
Design School Kolding - Denmark

This paper adds to the field of information design and includes insights from fields that have worked with transformation as a way to understand forms and create pictures. The intention is to investigate how these insights could become a source to guide the design process directed at visualising statistical infographics. In this lies the assumption that insights on transformation processes can help the designer to create meaning from statistics. Transformation perspectives by Groupe μ within the area of pictorial semiotics, D'Arcy Thompson in the field of Morphology, as well as Otto and Marie Neurath and their visual language Isotype (International System Of TYpographic Picture Education) will be demonstrated and compared. Furthermore, based on professional design experience, the paper ends by defining transformation and discussing the application of the presented theories for today's designer.

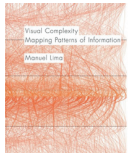
CONCEPTUALIZING TRANSFORMATION

IIID
Vision Plus
2014

PIA PEDERSEN
Department of Communication Design
Kolding Design School

INTRODUCTION



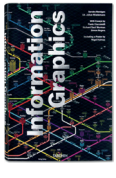


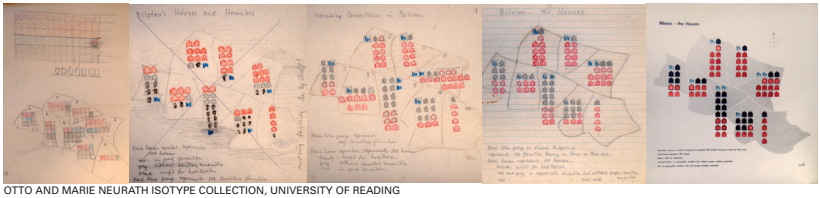




MY APPROACH

"I want to make something that looks like this"





OTTO AND MARIE NEURATH ISOTYPE COLLECTION, UNIVERSITY OF READING

PH.D.-PROJECT

The process of transforming statistics into infographics

CASE: Bilston (UK) 1945 -1947
Re-housing plans
Slum clearance in Bilston

PAPER OBJECTIVE

To investigate how insights on transformation can become a source to guide the process of visualising statistical infographics

ASSUMPTION

Insights on transformation processes can help the designer to create meaning from statistics

TRANSFORMATION
PERSPECTIVES

FREDERIK STJERNFELT
Semiotics

GROUPE μ
Pictorial Semiotics

D'ARCY THOMPSON
Morphology

ISOTYPE
Information Design

WHAT IS TRANSFORMATION?



change of form, constitution, or substance
– Chambers 20th Century Dictionary, 1983

WORKING DEFINITION

Transformation is the process of changing the central argument in statistics from being hidden behind numbers to becoming visually comprehensible for the layman.

In a transformation process sketching experiments are repeated taking on different transformation acts that help clarify the meaning, relationships and visual identity of the chosen statistics.

FREDERIK STJERNFELT



"The very concept of the sign may thus, paradoxically, have hindered the insight into the centrality of the concept of transformation"

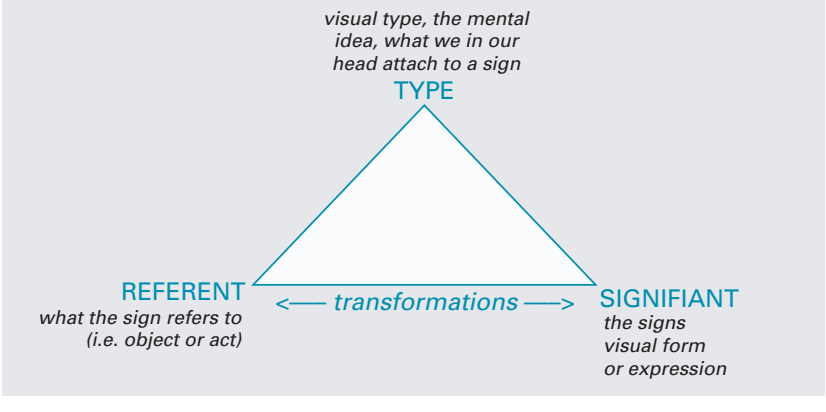
- Stjernfelt 2007, 120

GROUPE μ

Traité du signe visuel: Pour une rhétorique de l'image (1992)



TRIANGLE MODEL FOR VISUAL SIGNS



FAMILIES / Actions	GEOMETRICAL	ANALYTICAL	OPTICAL	KINETIC
Adjunction (+)	aggrandizements	positive filtering indifferentiations continuisations	accentuating contrast expanding depth enlarging area of sharpness	
Suppression (-)	reductions	negative filtering differentiations discretizations	attenuating contrast contracting depth shrinking area of sharpness	
Substitution (±)	projections topological transformations	substitute filtering	displacing contrast	
Permutation (~)	translations rotations displacements congruencies		inversions (negative)	integrations anamorphosis

TRANSFORMATION SYSTEMS

GEOMETRICAL TRANSFORMATIONS

Projection



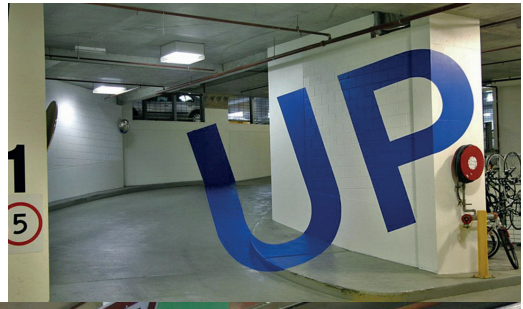
Topological transformation

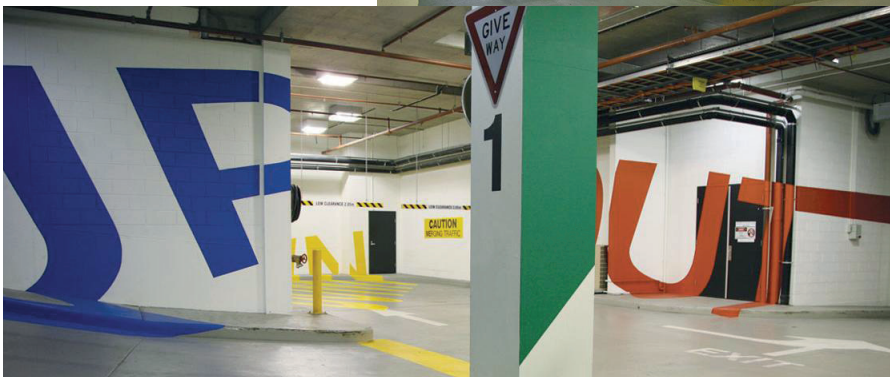


KINETIC
TRANSFORMATION

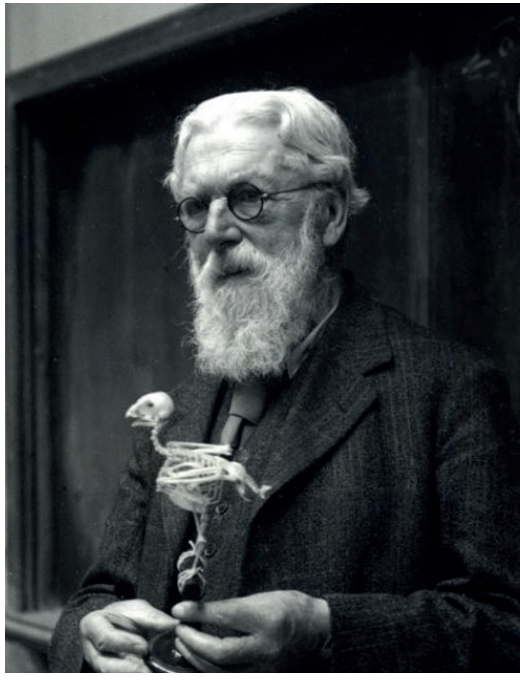
Anamorphosis

Signage example
by Emery Studio



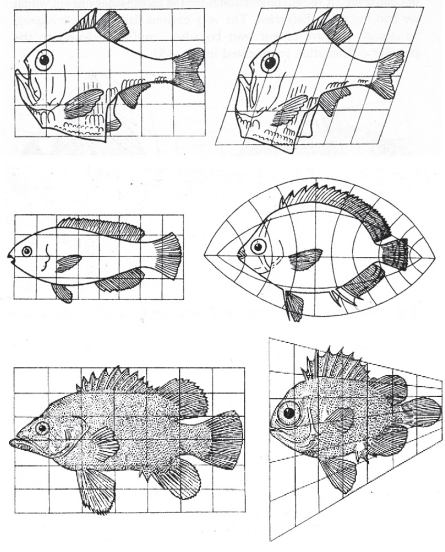


D'ARCY THOMPSON

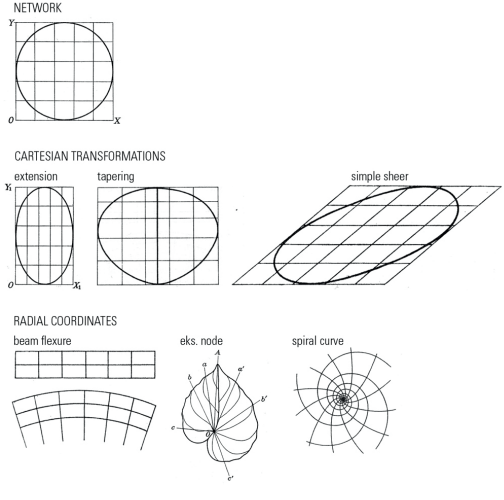


PAIRS OF RELATED FISH SPECIES

Show how species are related by analysing how two different but more or less apparently related forms can be shown to be the transformed representation of the other



TYPES OF TRANSFORMATIONS



ISOTYPE

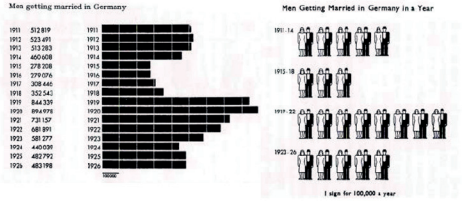


“into an essential visual message which is clear, accurate, intelligible, and worthwhile"

– M. Neurath 1960, 115

"Wer am besten weglassen kann, ist der beste Lehrer"

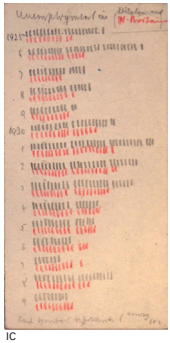
– Reidemeister 1932, 315



THE TRANSFORMER

The process of transformation contained steps such as understanding, collecting, transmitting and linking data and thus also making it comprehensible

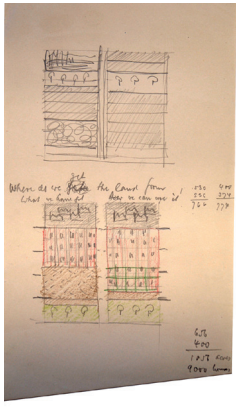
OBSERVED
ACTIONS AND MOVES

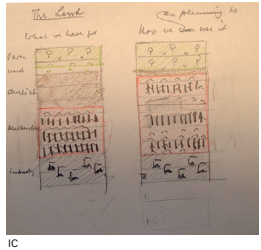


IC

DATA	ARRANGEMENT	PICTURE	TEXT
- selecting - calculating - adding - needing - removing - combining - combining charts - dealing with no data	- counting/choosing units - overview - separating/grouping - rotating - small adjustments - changing perspective - ideating - modifying units - adding axis/comparison	- adding symbols - adjusting symbols - führungsbilder - map / orientation - sharpening message	- adding title - changing title - adding caption - changing caption - adding comment - adding type size
OVERALL	COLLABORATION	COLOUR	STYLISATION
- crossing-over - consistency - chart rotating - working on a chart part - back and change	- letter - presentation to client - sketch to client - blueprint to client	- adding colour - changing colour	- general aesthetics - detail aesthetics - change of perspecitve

EXAMPLE
INTERMEDIARY STEPS





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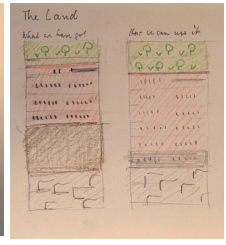
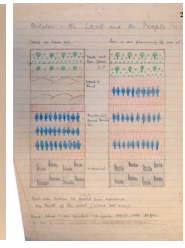
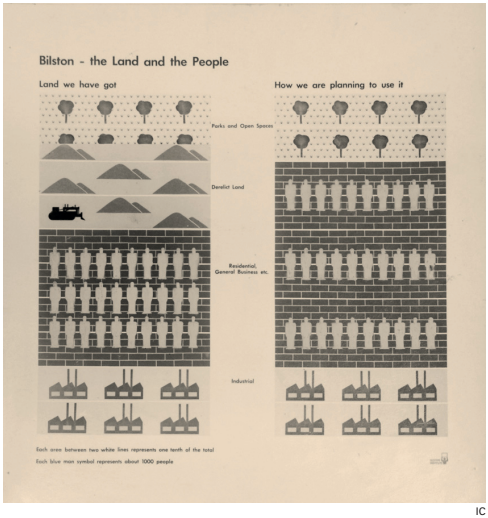




EXAMPLE
FINAL CHART

The message in the chart was constantly reframed and improved in a process of discovery and clarification.



IC

COMPARISON

GROUPE μ
Pictorial Semiotics
Rhetoric For Images

referent

type

system of possible transformations



signifiant

D'ARCY THOMPSON
Morphology
Growth And Form

co-ordinate system
organism



cartesian transformations

mathematical function

table



related organism

MARIE NEURATH
Information Design
Visual Education

statistical table
Isotype language



isotype language principles

co-ordinate system

geometrical transformations



chart

APPLICATION

REFINED WORKING DEFINITION

Transformation is the two-sided process of depicting and keeping invariant the relationship in statistical data that creates meaning and facilitates reasoning for the layman.

With the particular circumstances of the given situation, transformation consists of separate variations of the starting point constantly pushing towards improving the visual meaning. These variations can be described through a series of transformation types that enable analysis, deformation, distillation, identification, comparison and stylization.

A guiding philosophy should emphasize the following:

One is working with transformation exactly because every situation is different.

FORMING A GUIDING PHILOSOPHY

A mind-set in the form of transformation keywords and pictures that would guide the process and the meaning behind the many different possible transformation types.

A framework, like Groupe μ's system of transformations

A compendium of definitions, transformation examples, and collected texts.

CONCLUSION

The different perspectives on transformation contained insights that could give substance to a conception of transformation within the visualisation of statistics. They showed different possibilities in transforming and thinking transformation and also proved to have outcomes where meaning and identity were created in favour of decoration.

Finally these theories formed the basis for refining a definition of transformation and opened the discussion of what a guiding philosophy for today's designer might look like.

Such a guiding philosophy could consist of a mind-set in the form of transformation keywords that would guide the process and the meaning behind the many different possible transformation types.



THANK YOU FOR LISTENING

...AND

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