Agenda

- Future and Futures
- The field of Futures Studies
- Design process
- Design as an approach in research
- A model as the synergy of both fields
- An example from the Munster School of Architecture
As a phenomenon of time future will always lie ahead of today, therefore it cannot be researched.

BUT

With soaring uncertainties the urge to look into the future, to understand the developments, and to solve given issues has risen.

Our environmental problems have made us aware of the responsibility our actions have on the transformation of life on earth (i.e. the concept of the anthropocene)

Future has become the glimpse of hope that lies ahead and can be formed today …
Concept of Futures

diagram based on »Futures Cone« Voros 2003: 13 & Dunne/ Raby 2013: 5
Futures Studies

Approach possible, probable, plausible, un-/ desirable futures:

"Logic of production" – futures are produced by …

• Exploring the possibilities and probabilities using present facts and figures and therefore the intent is to be scientific
• Result: What may and could be –> the possible & probable futures

"Logic of perception" – futures are created by …

• Investigating the preferable, avoidable, and plausible using normative research methods by e.g. involving stakeholders
• Result: What is wished for and perceived reasonable –> desirable & plausible futures

based on a lecture from Prof. Dr. G. de Haan 2013, FU Berlin / Institut Futur

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Futures Studies

Futures Studies / Futures Research / Foresight
the approach to “deal” with future and explore options for action

An interdisciplinary field in the humanities and social sciences with researchers and practitioners coming from various backgrounds

Research approach and process – normative and/or explorative finding out about various possible, plausible etc futures

• The normative approach often is participatory therefore multi-disciplinary
• The explorative process finds insights and optional paths in the attempt to support decision making

Based on Grunwald 2016, Inayatullah 2012, Bell 1997

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Futures Studies

A definition of Futures Studies (FS):

- The academic (scientific) engagement with possible, preferable (or avoidable), plausible, and probable developments in the future, and the options of how they can be formed, taking into account the prerequisites of past and present. (German futurist R. Kreibich (1995) / “plausible” added by de Haan)

- The objective of FS is to identify possible, probable, plausible, and desirable futures (usually inter- and/or multi-disciplinary) and to analyse them in detail and to evaluate them. (Lecture by de Haan 2013)
Results of futures research

In the process the objective mostly is to generate

- Knowledge for **orientation**
- Knowledge for **decision making**
- Knowledge for **action**

... less to design future
Design / to Design

- A procedure of
  - planning, shaping, composing, constructing, creating ... 
  - synonym for creating artefacts like products, communication or services
- Designers as the profession
  - Planning, shaping, constructing the interfaces of an artefact
  - Establishing the relationship between it and the user

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Procedure of designing

How designers acquire knowledge and create:

- **Understanding** the problem and the stakeholders (i.e. Human-centred)
- **Ideation** of options
- Bringing it **together**

Distinction within design practices (Source: Krippendorff 2006)
Design Thinking – a creative multi-disciplinary mind-set

managers in businesses are opening up to creative thinking procedures
A Design Process

- **Analysis** (the True)
  - NOW
- **Projection** (the Ideal)
  - IDEA
- **Synthesis** (the Real)
  - TOMORROW

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**ANALYSE**
THE TRUE
What is today

**SYNTHESE**
THE REAL
What is tomorrow

**PROJEKTION**
THE IDEAL
What could be

**COMMUNICATION**

APS-Design Process Model
Jonas (Source: Jonas 2004)
Generic Design Process

Macro process:  
(design process)

- **Analysis**  
  Inductive

- **Projection**  
  abductive

- **Synthesis**  
  deditive

Micro process  
(a learning cycle)

- **Observe**
- **Reflect**
- **Plan**
- **Act**

**Analyse**  
THE TRUE  
What is today  
deductive

**Projecktion**  
THE IDEAL  
What could be  
abductive

**Synthese**  
THE REAL  
What is tomorrow  
deductive

**Communication**  
»the driver«

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Generic Design  
Process Model Jonas  
(Source: Jonas/  
Münch 2007: 26)
“Research through Design

is in the designerly way the act to research and draft. Designer / researcher are directly involved in creating connections and shape the object of research.

An example for its use: potentially all wicked problems in the sense of Rittel.“ (Jonas 2004 – own translation)
Research through Design meets Futures Studies?

- Futures Studies / Foresight: Visionary approach – intangible
- Design / Research through Design: Implementing ideas – tangible
- Their similarity: Wicked Problems (Rittel 1971)
  - Complex problems that have not one solution but may generate new problems
  - Problems that may change by the point of view
The model uses ... and addresses

- **... futures studies / futures research** as a mindset and a way to find alternatives as well as visionary approaches to deal with present and future issues ... getting often only intangible result.

- **... design** as a process creating artifacts, communication or services and therefore tangible results ... often lacking visionary aspects

- **... combining** the Design and Futures Studies approaches i.e. the alternative viewpoints, a visionary mindset and ideas to create tangible results
APS/PAS – Synergy-Model

Generic Design Process adding concept of futures

APS: Intelligence and goal driven problem-solving as the driving and leading activities in the research process
PAS: Projection as the driving and leading activity in the innovation / exploration / research process
(Source: Jonas/Chow 2008)
TOOL-BOX adaptation from the (Jonas/Chow 2008)

<table>
<thead>
<tr>
<th>ANALYSIS</th>
<th>PROJECTION</th>
<th>SYNTHESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction (→ Probable &amp; possible developments / futures)</td>
<td>Abduction (→ desirable / undesirable developments / futures)</td>
<td>Deduction (→ plausible developments / implementation possibilities)</td>
</tr>
</tbody>
</table>

Research Observing

Get data on what is: How to get data on the matter at hand and the current situation?

Get data on future developments: How to get information on developmental paths that may be un-/desirable?

Verify Data as issue: How to get data that can be used to verify plausible developments & possibilities for implementation

Analysis Reflecting

Break down Knowledge on what is: How is the data of the current situation being evaluated and can it be transferred into any developmental paths?

Evaluate insights of future related data: How is the data being evaluated and how to make sure to differentiate it from the possible and probable developmental paths?

Define issue & make a list of prerequisites: How can the developments/images of the future be categorised into possible, probable, un-/desirable? Which evaluation scheme and implementation may occur?

Synthesis Planning

Find global viewpoint: How can the current situation be put into perspective and which possible and probable developments can be concluded?

Create visions of the future: How can the insights of the future be combined in a credible way to create alternative un-/desirable images of the future?

Generate and design solutions: How can with the material at hand ideas and solution be designed and implemented?

Realisation Acting

Consent on current situation: How is the data on the current situation, the viewpoint and developmental paths being presented?

Consent on the issues and the goal at hand: How to present the images of the future to create an understanding of the objective /issues that the visions of the future show?

Decide which solutions is feasible and realistic. Which steps are necessary for implementation? Which decisions need to be made?

»as soon as the communication ends, the design process ends.«

( Jonas et al. 2004: 7)

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Method-Wheel for the functionality of the Synergy-APS/PAS-Model

**Approach**
- Unbiased and repeating (iterative Process)
- Withstand uncertainty
- Innovative and creative

**Actors / Participants**
- Researchers – normative Foresight / Futures Studies
- Researchers – Design Research
- Designers / Design Thinker
- Experts on the Topic
- Interested Civilians / Stakeholders

**Objective**
- Options for Action
- Ideas for Implementation
- Knowledge for Transformation
What can the model provide?

- A possibility to **combine valid research with implementation** – from theoretical to practical
- A structure supporting **academic research in Futures Studies** giving enough space to integrate participatory and creative methods
- A thought model for **planners and designers to look beyond** their usual boundaries
- Hypothesis: Projects with transformative character may result.
Münster in 2050 –
How could a chosen district in Münster develop?

• In an introductory class on Futures Studies for architecture students at the Munster School of architecture
• OBJECTIVE was to explore and show an overview of the district in 2050 by developing a plausible scenario a district in Munster
• Using the PAS-Synergy-Model as a structure
The Harbour district
2050
in Munster, Germany

© Project by the architecture students Maria Meinert, Laura Offermann, Valentina Radile, and Lisa Schirk at the MSA – Münster School of Architecture Winter 2016 for an introductory course in Futures Studies
The Process – Projection

- **Starting with un-/desirable futures**
  - Observe: past to present and interview current stakeholders in the district
  - Reflect: the status quo
  - Plan: Brainstorming, mind-mapping etc
  - Act: Bring all together in a desirable and an undesirable scenario as an utopian and a dystopian image of the future
MUNSTER Harbour | the past – shipping hub
MUNSTER Harbour | today – trendy young pier
MUNSTER Harbour | today – trendy young pier
MUNSTER Harbour | currents plans and architectural contests
Postal delivery worker Beate

Question was – how will the district look in 40 years:
Everything will be electronic (she meant digitised) more and more email. Writing letters will be out. Am afraid soon there won’t be anymore postal service …
Bar owner Thorsten

Question was – how will the district look in 40 years:
I can imagine that the whole harbour district will be developed and all of the students will live here and all night life will happen here.
Passenger No. 1

Question was – how will the district look in 40 years:
It grows it grows it grows
Passenger No. 1

Question was – how will the district look in 40 years:  
Don’t know. Probably just built up with modern architecture. But the beautiful old buildings should be preserved- How it is typical for Munster.
Question was – how will the district look in 40 years:
As you see, everything is expanding here. There’ll be more places where young people can spend their free time. And there will be more housing as you know that is missing. And it is all being built here.
Utopia

• Sustainable developments with ecological life style is the main paradigm
• Architecture supports a communal life style with a mix of diverse inhabitants
• The district booms supporting the arts and many options for leisure time
Dystopia

• Growth and profit are the main paradigm
• Architecture supports the prestige life style
• The district has been complete gentrified
Find the possibilities:

- Observe: in the two scenarios what has been left out that may be probable but not necessarily desirable?
- Set-up a probable scenario by also using your research and the knowledge you acquired.
## STEEP-Analysis

<table>
<thead>
<tr>
<th>Social</th>
<th>Technology</th>
<th>Economy</th>
<th>Political Ecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø Has some affordable housing  Ø Has become the artist district  Ø Offers places for music, film and night life</td>
<td>Ø Artist scene attracts avant-garde  Ø New housing is being built  Ø Leisure time offers bloom</td>
<td>Ø The artist grow up and become avant-garde  Ø Behind the scene expensive housing  Ø Offers for leisure time expand</td>
<td>Ø Hardly any self-sustaining building  Ø Absence of alternative energy resources</td>
</tr>
<tr>
<td>Ø Mobility thru cars, public transportation  Ø High density of bicyclists  Ø Smartphones are a must</td>
<td>Ø Technological advances in mobility  Ø Ecological consciousness supports expansion of bicycle friendly infrastructure  Ø Advances towards the “Smart city”</td>
<td>Ø Less cars towards sustainable mobility  Ø Bicycles a main part of transportation  Ø Smartphone/ Smartwatch support daily life – navigation, communication etc</td>
<td>Ø Strong political interests  Ø Development is often pushed through by political rulings</td>
</tr>
<tr>
<td>Ø Gastronomy on ground level / boardwalk  Ø Office space on the upper levels  Ø Shopping is outside the district</td>
<td>Ø Gastronomy stays strong  Ø More office space is needed  Ø Small shops gain but closer shopping options are needed</td>
<td>Ø Gastronomy keeps the boardwalk  Ø New office space is built (B-Side)  Ø Shopping centre on the boardwalk – little shops lost their business</td>
<td>Ø Technological advances in generation of energy  Ø Renewable energy resources are expanded</td>
</tr>
<tr>
<td>Ø Technological advances in generation of energy  Ø Renewable energy resources are expanded</td>
<td>Ø Mainly self-sustaining building  Ø Mostly Renewable energy resources are being used</td>
<td>Ø Depending on government – gain or lose of diversity  Ø Uniform city scape</td>
<td></td>
</tr>
</tbody>
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### Projections: Matrix with two dimensions

<table>
<thead>
<tr>
<th>Wirtschaftliches Wachstum</th>
<th>hoch</th>
<th>niedrig</th>
</tr>
</thead>
<tbody>
<tr>
<td>soziale und kulturelle Verbindungen sind wichtiger als wirtschaftliche Entwicklung an diesem Ort.</td>
<td>- die vorh. Gewerbe und Dienstleistung sind ausreichend</td>
<td>- es findet Kommunikation und Austausch mit Umgebung und Nachbarschaft</td>
</tr>
<tr>
<td>ausreichend qualitative Wohnquartiere für verschiedene Alters- und Berufsgruppen</td>
<td>- ausgeglichen qualitative Wohnquartiere für verschiedene Alters- und Berufsgruppen</td>
<td>- geplagter Zustand der Babauung</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>soziale Verantwortung</th>
<th>niedrig</th>
<th>hoch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schaffung von Arbeitsplätzen steht vor anderen Strukturen. Die Lage bestimmt den Wirtschafts-Standort (Nähe zum HBF, Autobahn, Kanal, Industriegebiet)</td>
<td>- alles wird mit Gebäuden für Gewerbe und Dienstleistung bebaut</td>
<td>- keine Rücksicht auf Umgebung und Nachbarschaft</td>
</tr>
<tr>
<td>schlechte Qualität der wenigen Wohnquartiere</td>
<td>- keine bzw. wenig Wohnquartiere</td>
<td>- hohe Dichte</td>
</tr>
<tr>
<td>hohe Dichte, unsauber, dunkel, ungemütlich</td>
<td>- kein attraktiver Kulturangebot</td>
<td></td>
</tr>
</tbody>
</table>
WAHRSCHENLICHES Szenario

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Brining it together

• Look at all three scenarios and develop a plausible one.
  • What of the “utopian ideas” maybe interesting and doable after all?
  • Use all possibilities that could be realistic in 2050?
• Create a future that is distinctly different from today
• Include your research!
**PLAUSIBLES**

**Szenario**

- **Bade Insel**
- **Kleine Insel**
- **PROMENADE ERWEITERT**
- **GRÜNE FASSADEN**
- **SCHWIMMENDE BÜHNE**
- **SHARING STATION**
- **NEW VERBINDUNG**

**Legende**

- **PROMENADE ERWEITERT**
- **GASTRONOMIE UND BÜRO**
- **NEUE WOHNQUARTIERE**
- **FREIZEITFLÄCHEN**
The synergy-model can give structure to a foresight process
- have tangible result (projects, social innovations etc)
- can encourage to use unknown methods

The synergy-model can give designers
- a tool to extend their repertoire of research methods
- to change their perspective right in the middle of working on the solutions
- Be more responsibility about the future
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Thank you

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Selected References

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