

## Future of VET in Austria - conceptual considerations about anticipation

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**“Shaping the futures of (vocational) education and work”**

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## Material

- Lorenz Lassnigg (Hg.), Forum: Zukunftsfragen der Berufsbildung. Dokumentation des Doppelforum auf der Österreichischen Konferenz für Berufsbildungsforschung, 8.-9.Juli 2010, Steyr, im Internet: Text <http://www.equi.at/dateien/ForumZukunftText.pdf>  
Präs <http://www.equi.at/dateien/ForumZukunftThesenLL.pdf>
- Lassnigg, Lorenz; Baethge, Martin (2011), **Zukunftsfragen der Berufsbildung in Österreich - Bericht und Reflexion zum thematischen Forum**, in: Markowitsch, Jörg; Gruber, Elke; Lassnigg, Lorenz; Moser, Daniela (Hrsg.), Turbulenzen auf Arbeitsmärkten und in Bildungssystemen. Beiträge zur Berufsbildungsforschung, Innovationen in der Berufsbildung, Band 7, Studienverlag, Innsbruck, S. 70-95.

## Agenda

- How to deal with the future in a ‚scientific‘ way?  
systematic, critical
- Anticipation:  
time and space
- VET future embedded in societal context
- Some more concrete propositions

## How to approach the future in a scientific way?

- Background: a (hysterical) **rhetoric of change...**  
,everything changes ever faster, changes create changes, actors have to change as response to changes, otherwise there will also be changes...‘
- ...and ,**real‘ changes** are going on and will continue in the future (,Modernity‘ and its followers) ...
- **Science/research** try to observe these changes; **tasks** are
  - to identify changes and distinguish between rhetoric and ‚reality‘
  - to identify reactions to the changes (ongoing and potential)
  - to assess changes and reactions according to evaluative criteria
  - to assess and develop the criteria (this ,
- In **cultural** (and institutional) **theory** the distinction between ‚rhetoric‘ and ‚reality‘ is blurred, ‚rhetoric‘ is a strong part of ‚reality‘, might even structure reality, however, we have observer-observed
- How comes the **future** in? trad.science: **prediction**; constructivism?

## Change and progress? Share of the richest households in total private household incomes USA, in %



Source: Till van Treeck (2011) „75 Jahre General Theory of Employment, Interest and Money“, Arbeiterkammer Wien, 29.09.2011.

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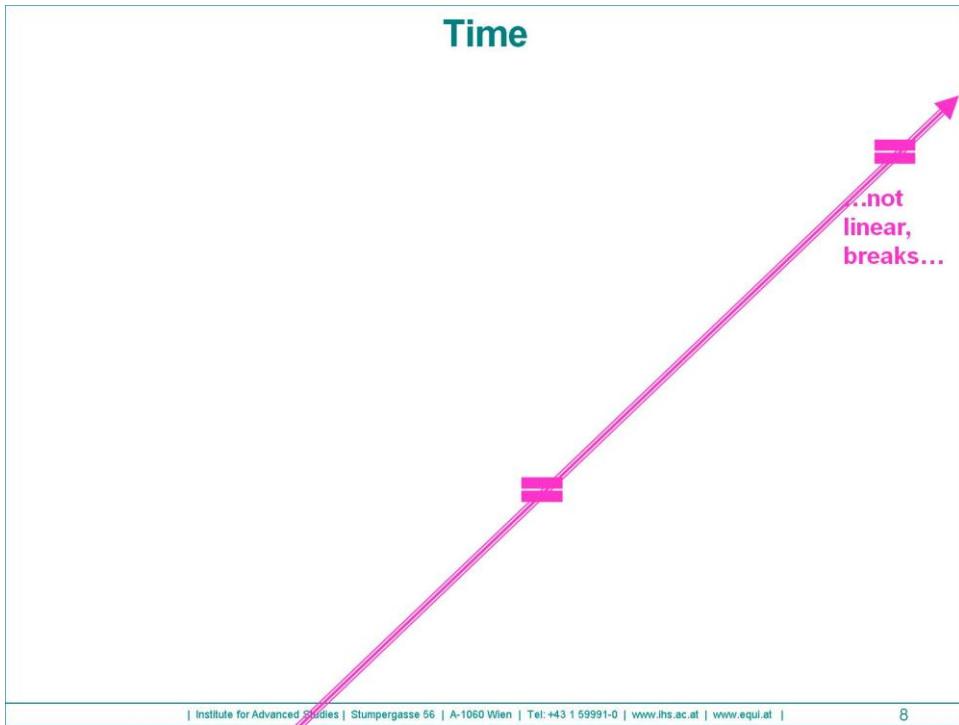
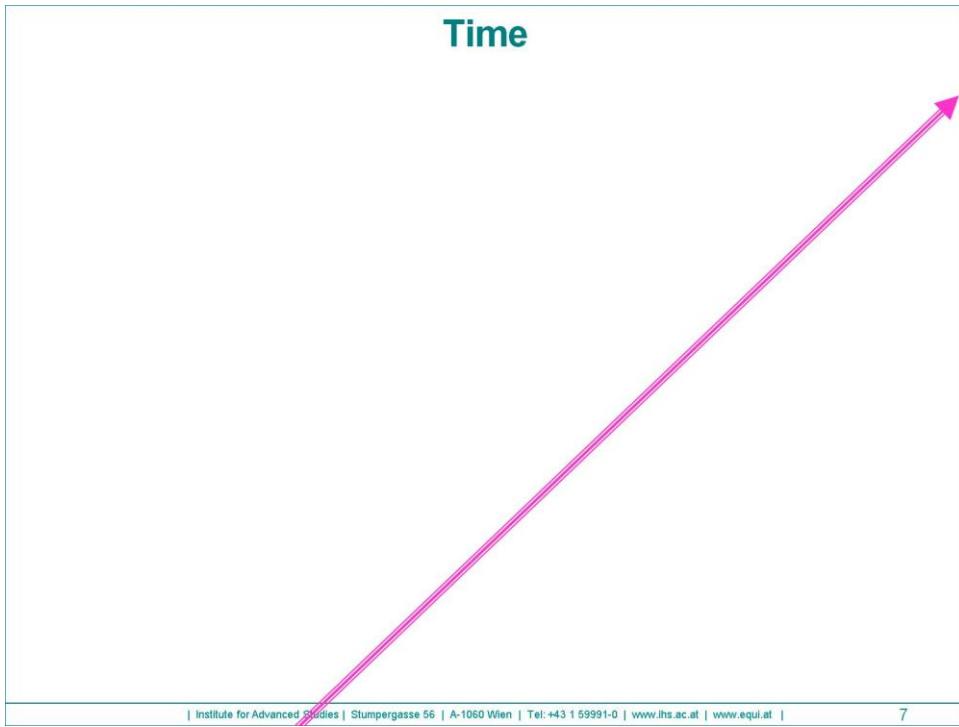
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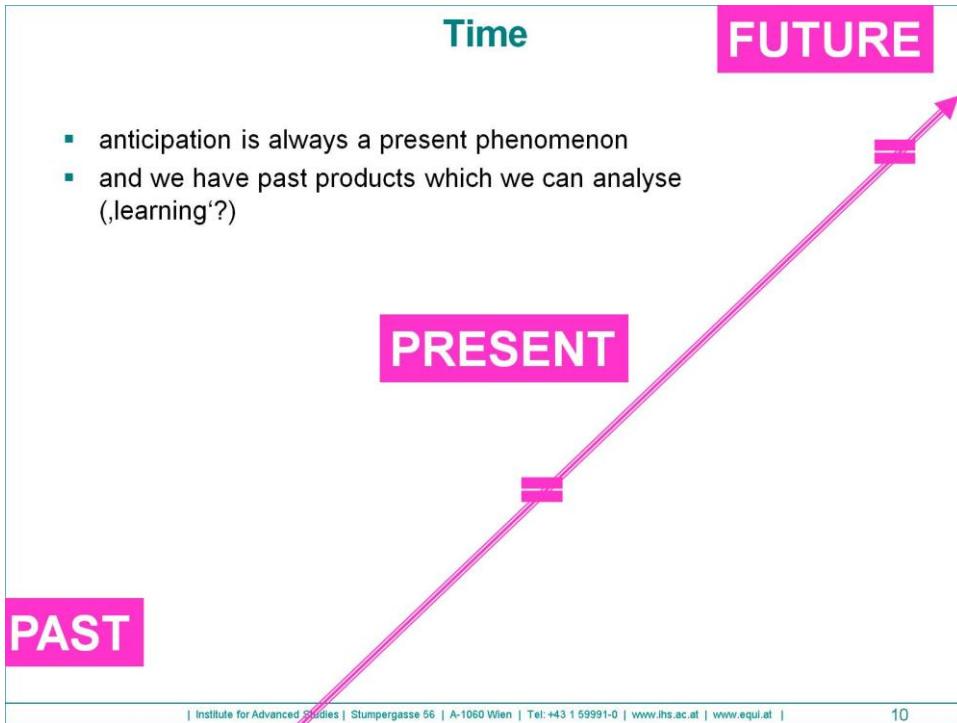
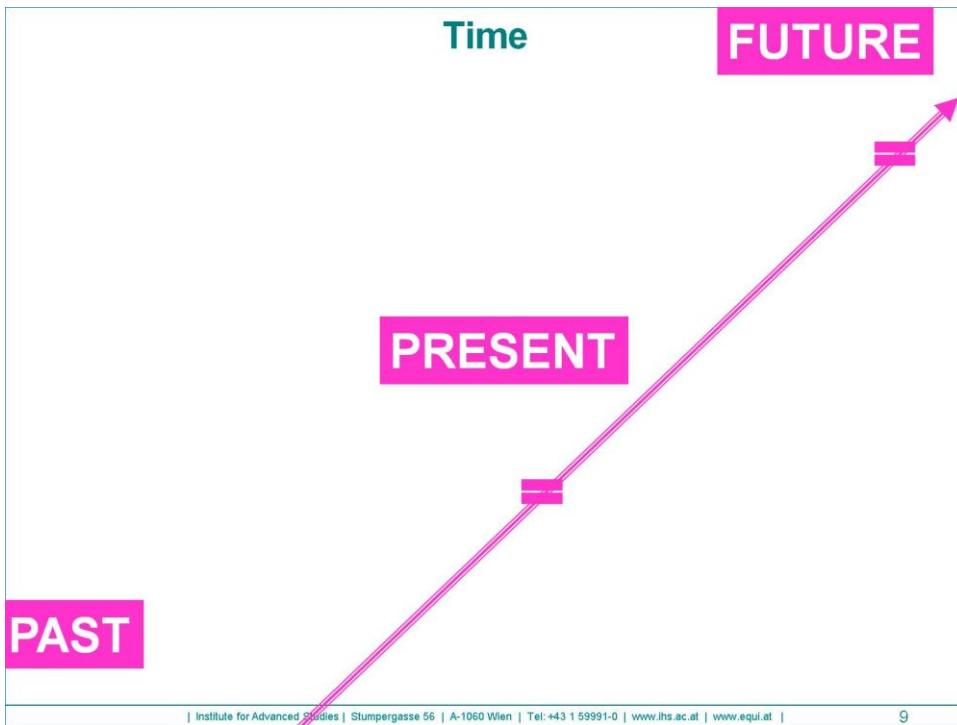
## ‘Anticipation’

- An approach to deal with the future that is systematic and critical
- ... ‘critical’ means to question and assess the rhetoric or the discourses
- ... ‘systematic’ has to consider time and space, both quite complex dimensions...
- Time: main issue is the relationship of past – present – future
  - Anticipation (and thus a statement about the future) is a **present phenomenon**, embedded in the present state (or if we study it historically a past phenomenon)
  - Scientific evidence is only possible about the past and the present, there is no evidence about the future
- Space: main issue from a VET perspective is its embeddedness in the context of society
  - There is no isolated VET future

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### 3 Modes of anticipation (Leydesdorff) "Recursive"

- anticipation is always a present phenomenon
- and we have past products which we can analyse  
(,learning'?)

– **Recursive:** Extrapolation/projection of past development(s) into the future  
(models, but not only; can also be implicit; e.g. power relations...)

#### Examples:

- Demography
- Sector-Theory (agri-indus-service)
- Club of Rome - environment
- long-term economy  
(e.g. Kondratieff-Cycle)

PAST

### 3 Modes of anticipation (Leydesdorff) „Incursive“

- anticipation is always a present phenomenon
- and we have past products which we can analyse  
(,learning'?)

PRESENT

– **Incursive:** Extrapolation  
from present state

Structural or  
behavioral assumptions

#### Examples:

- economic models
- dynamic systems
- Life cycle theory
- path dependency

### 3 Modes of anticipation (Leydes FUTURE „Hyper-incursive“)

- anticipation is always a present phenomenon
- and we have past products which we can analyse (learning?)
- **hyper-incursive:** Use of expectations about the future, scenarios, simulations, breaks

#### Examples:

- Simulations „IV-future.at“
- OECD-‘Schooling for Tomorrow’
- CEDEFOP-‘Widening Horizons’
- NÖ-Netzwerkstatt
- Österreich Bildung 2021

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### 3 Modes of anticipation (Leydes FUTURE Summary)

- anticipation is always a present phenomenon
- and we have past products which we can analyse (learning?)
- **hyper-incursive:** Use of expectations about the future, scenarios, simulations, breaks

#### PRESENT

- **Inkursiv:** Extrapolation from present state

Structural or behavioral assumptions

- **Recursive:** Extrapolation/projection of development(s) into the future (models, but not only; can also be implicit; e.g. power relations...)

#### Basically:

- based on the assumption of historical laws or regularities
- disputed and much criticism (Verdrängung?)
- **all 3 Modes** are useful, Q: how to use?

#### PAST

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## Discussion

- Question of path-dependency; movement within path, or to change path?
  - strength difficult to assess (‘voluntarism’ – ‘determinism’ – unintended effects)
- Distinction of (levels of) observation and reality; often strongly related to the time dimension...
  - to distinguish present anticipatory statements about future from ‘real’ future which we do not know (e.g. ‘Globalisation’ or ‘Network Society’...)
- ...at the observation level, interferences between the different kinds of anticipation
- Anticipation as collective ‘knowledge production’ (combination of experts’ knowledge with actors’ knowledge)

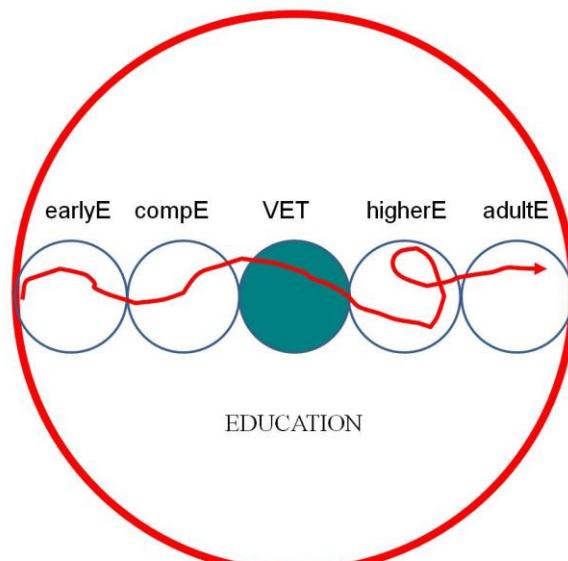
## Space

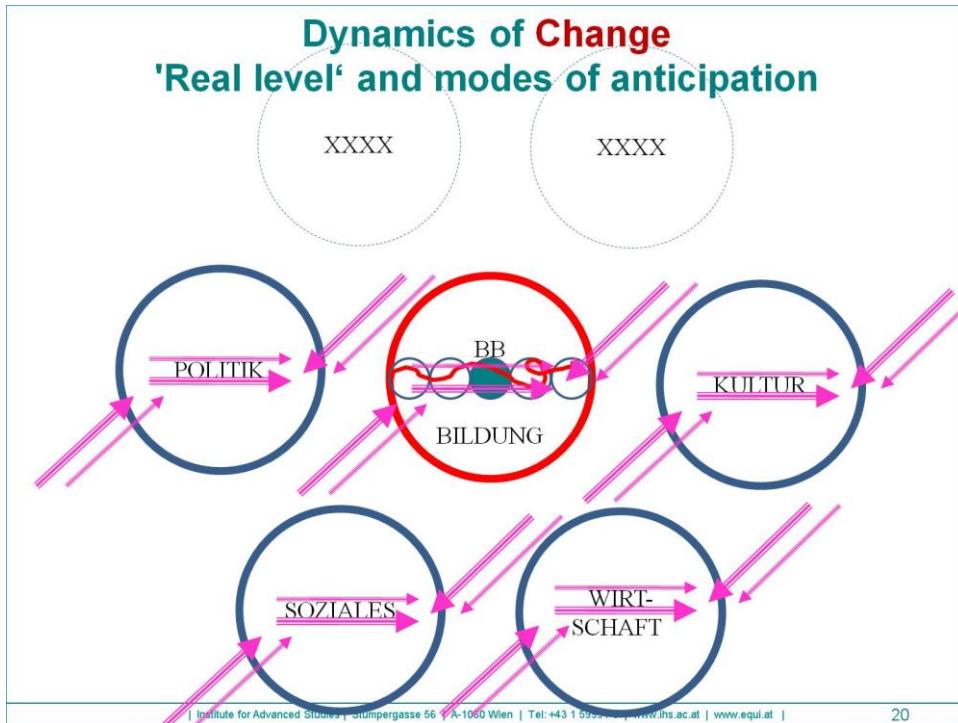
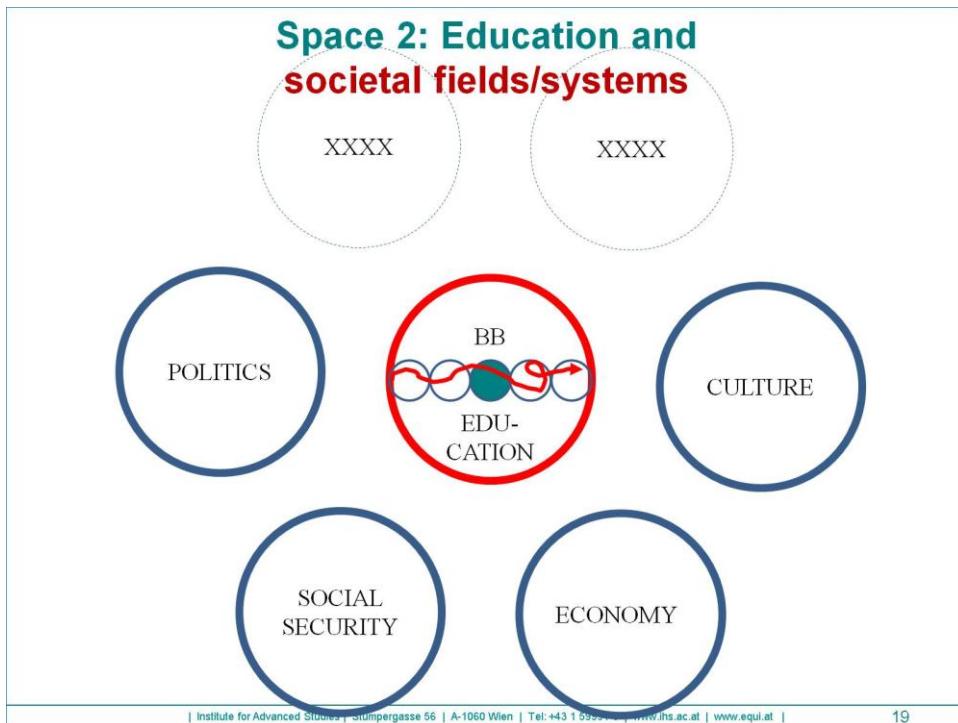
## Space

- ,Societal space‘:

- Education and its **subdivisions** (‘system‘ or field or sector und ‘sub-systems‘, fields, sectors)
  - Lifelong Learning*
- **Embeddedness of education** and relations to other societal fields (‘sub-systems‘): e.g., Politics, Economy, Social Security
  - Dependence*
  - Autonomy*
- Relationships between the other fields (‘systems‘)
  - Politics & Economy*
  - Politics & Social Security*
  - Economy & Social Security*

## Space 1: Education and ‘lifelong learning‘

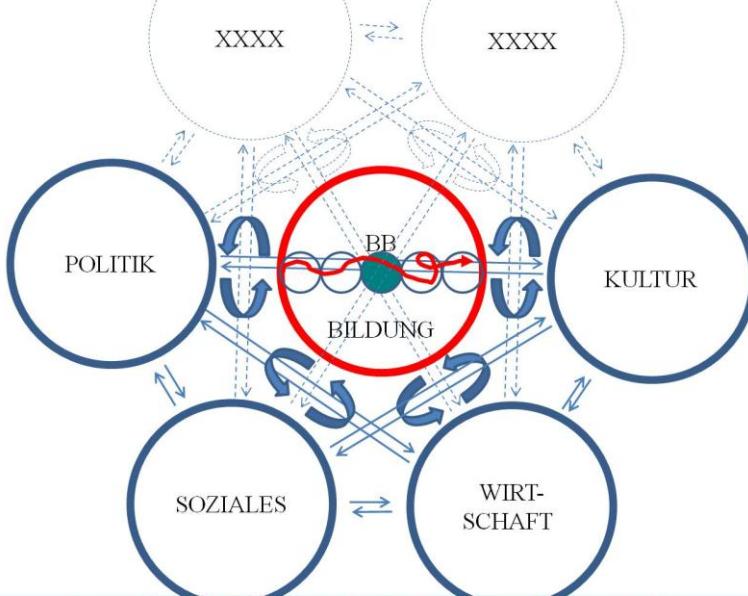




## Dynamics of change in time and space...

- ...concerns **each field** separately
- ...concerns the **interplay** of the fields
  - strength
  - harmoniously, contradictory
  - amplifying, decreasing
- ... **Politics** is ascribed a special position
  - is changing itself
  - should cope with all other changes
  - and influence them effectively according to goals
- functional vs. hierarchical differentiation (‘Autopoiesis’)
  - own dynamics in fields (‘systems’) or guided by politics?
- **Anticipation** should ‘enlighten’ these dynamics
  - through and for actors
  - for politics

## Space 3: Embeddedness and interactions



## Space 3: Embeddedness and interactions

## Question:

**How far must and do we know these interactions for a good anticipation?**

**Partly depends on assumptions:**

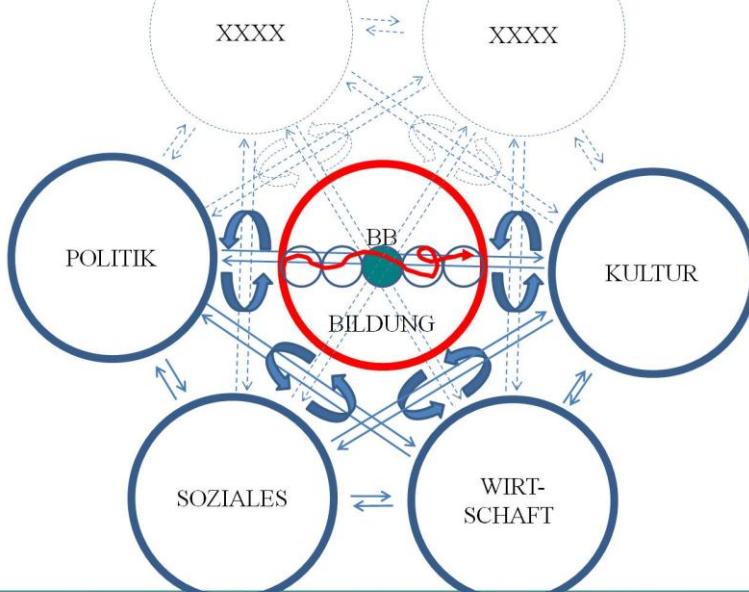
- (holistic) institutional embeddedness
  - liberal market approach
  - functional differentiation and autopoiesis

SCHAFT

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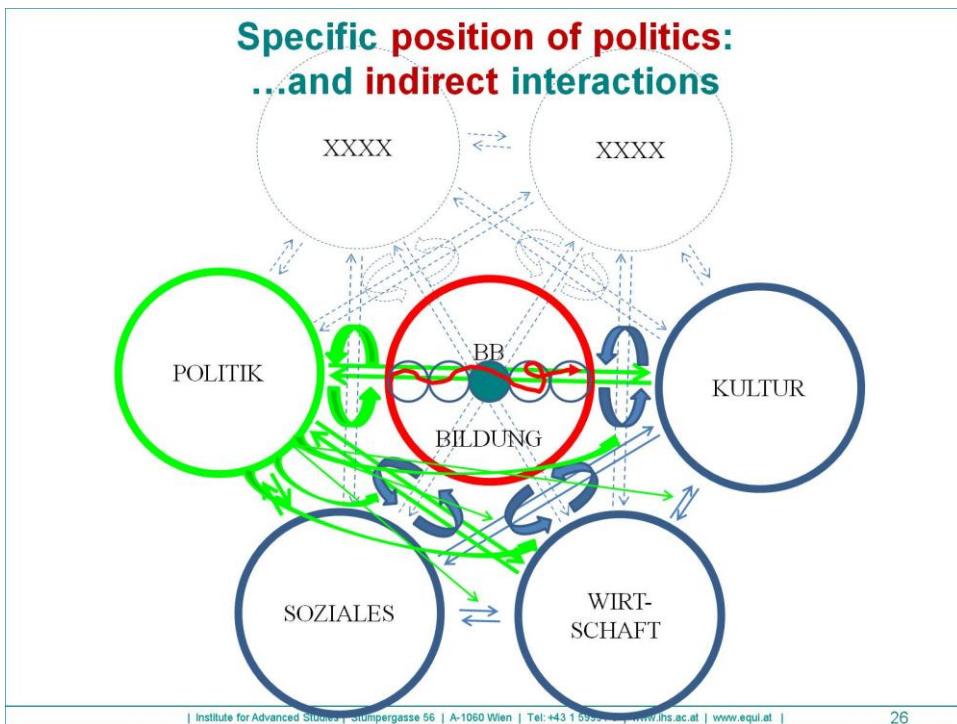
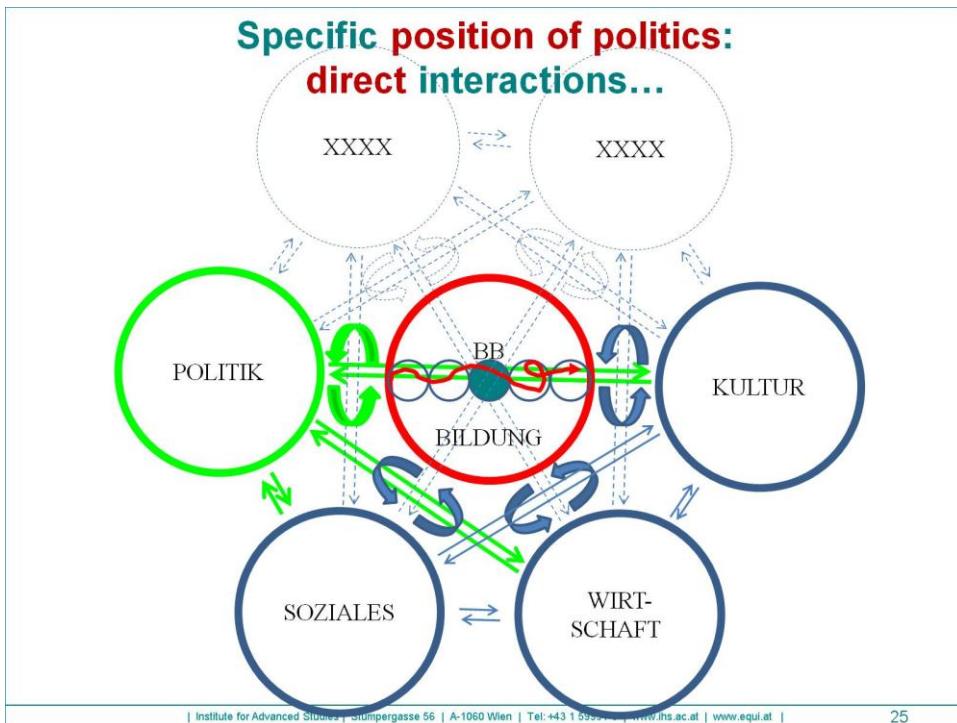
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## Space 3: Embeddedness and interactions



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**Specific position of politics:  
...and indirect interactions**

XXXXX <--> XXXXX

**Question:**

**Primacy of politics**

**How far is it possible to consider all these relationships in a sufficient (‘evidence based’) way?**

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**Education in space and time**

XXXXX <--> XXXXX

**FUTURE**

**PAST**

**PRESENT**

**This is the space to be considered for the anticipation of futures of VET**

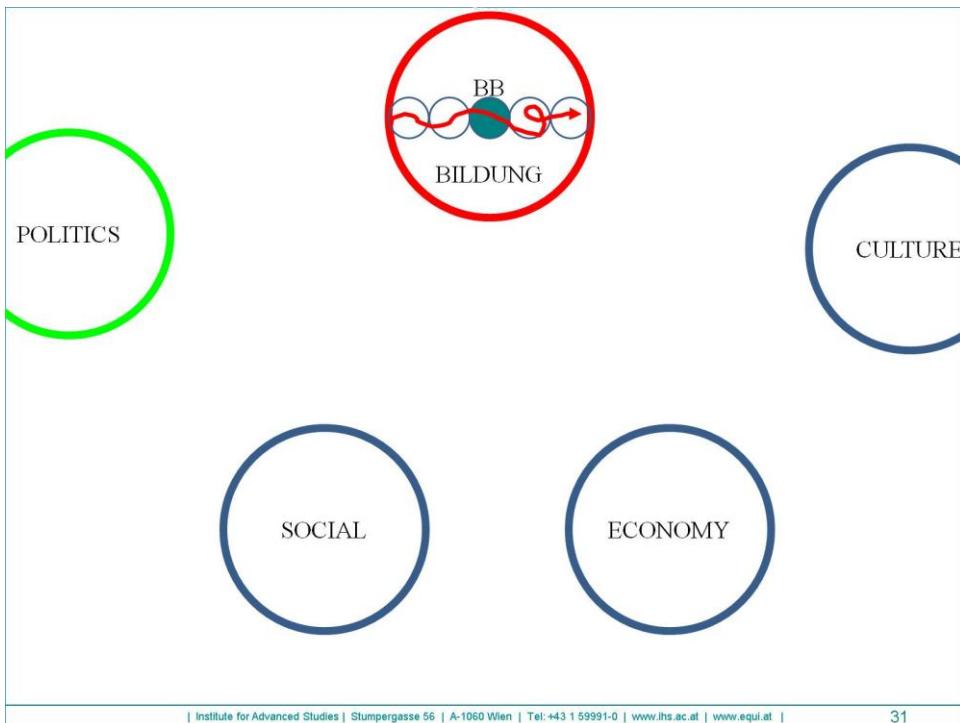
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## Steps of anticipation

- Step 1: Identification/observation of main present topics in different fields related to discourses about future in Austria
- Step 2: Relating these topics to the three modes of anticipation, past-present-future, analysis of main paths, and identification of main influencing factors from the different modes
- Step 3: Identification/observation of more concrete issues and goals of discourses about future
- Step 4: Identification of main policy topics and problems articulated by selected experts
- Step 5: Synthesising these to some priority areas of VET future

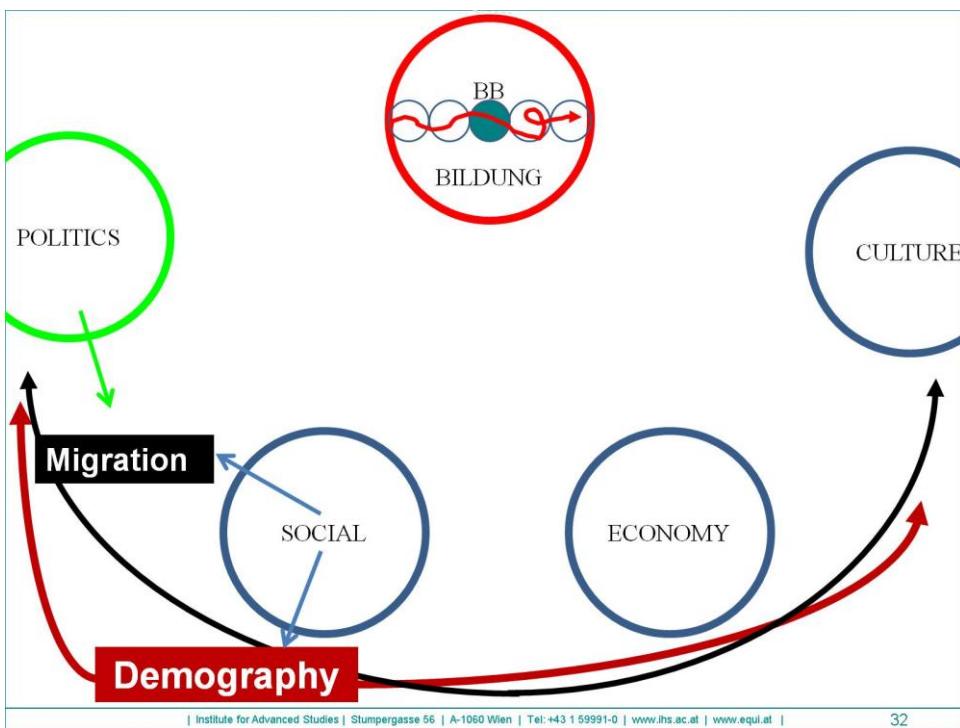
## Step 1 main topics in different fields

- Step 1: Identification/observation of main present topics in different fields related to discourses about future in Austria



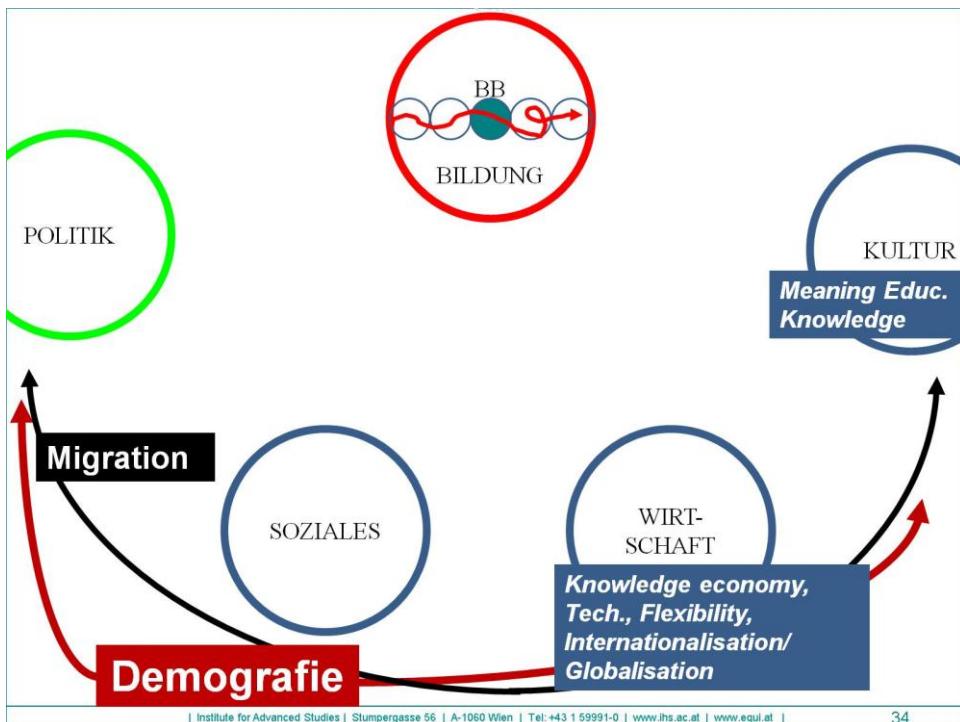
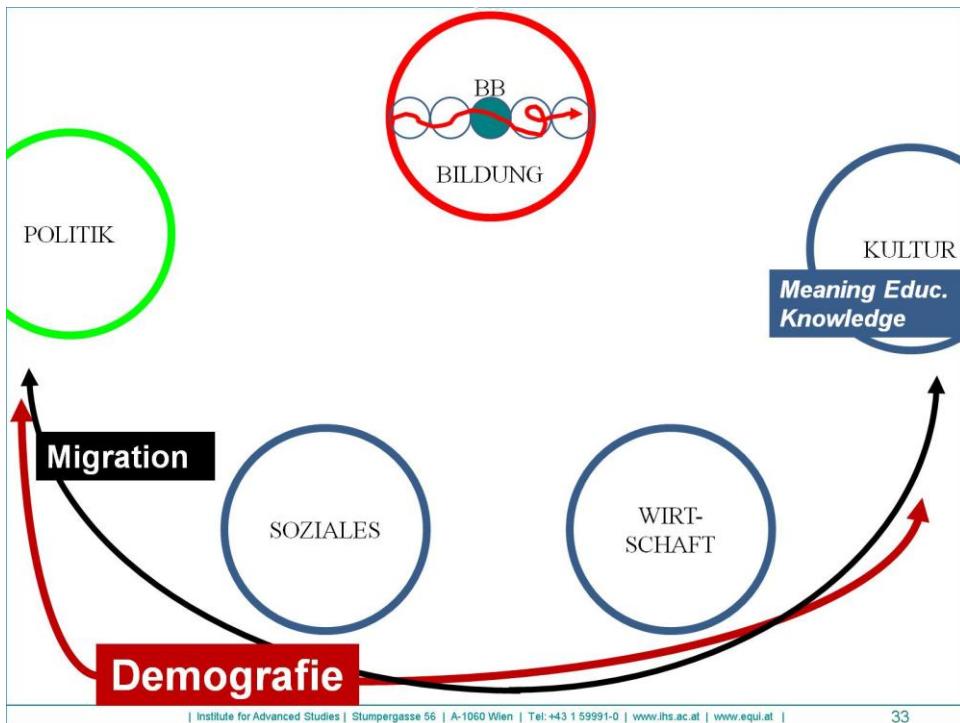
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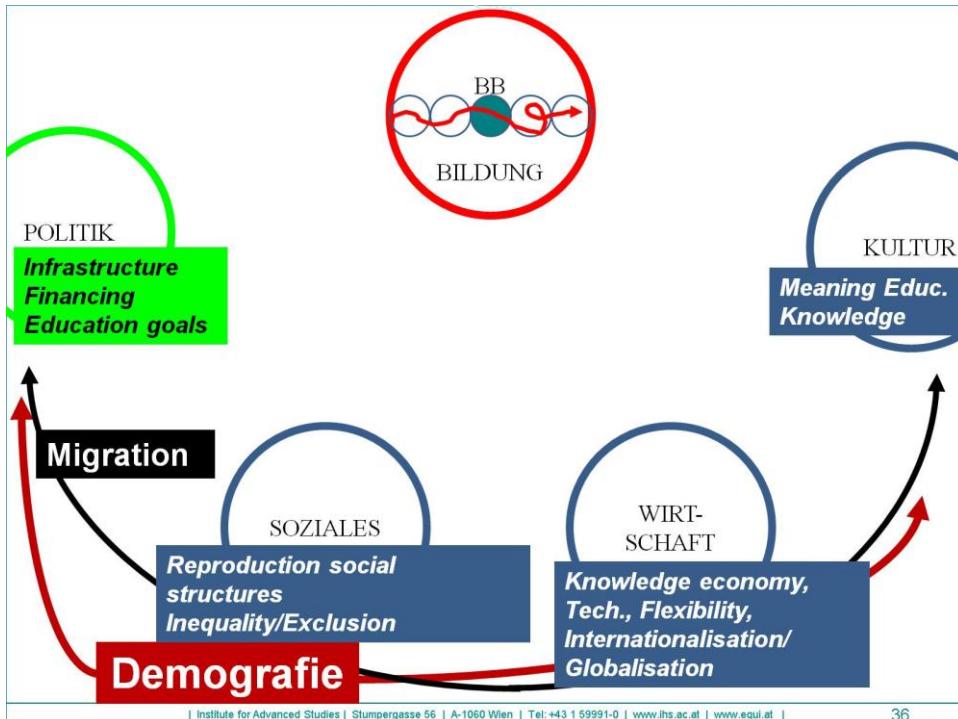
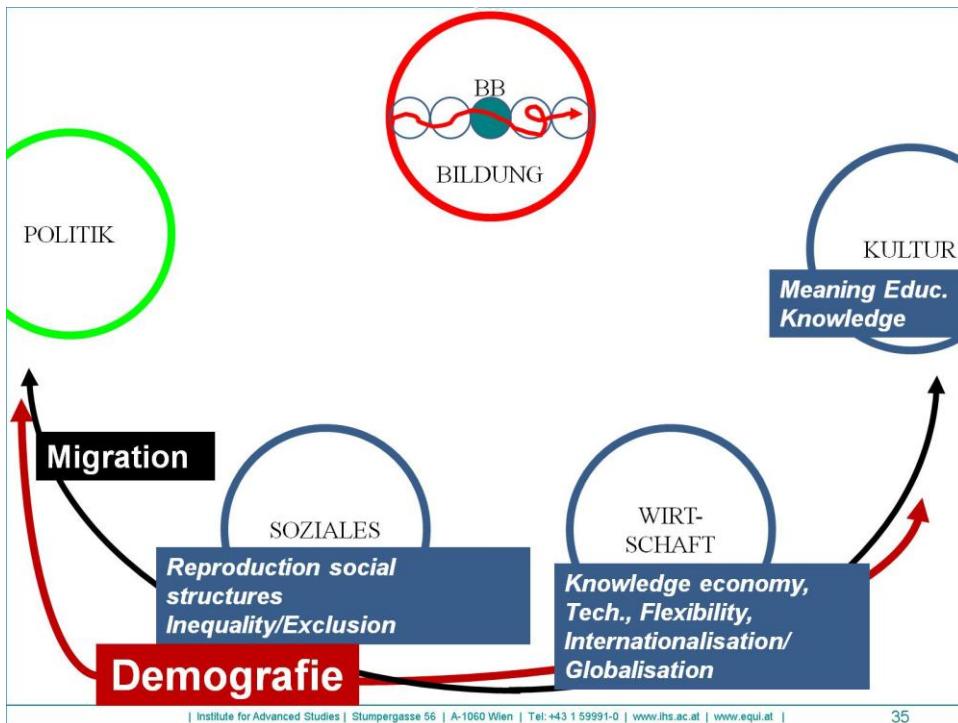
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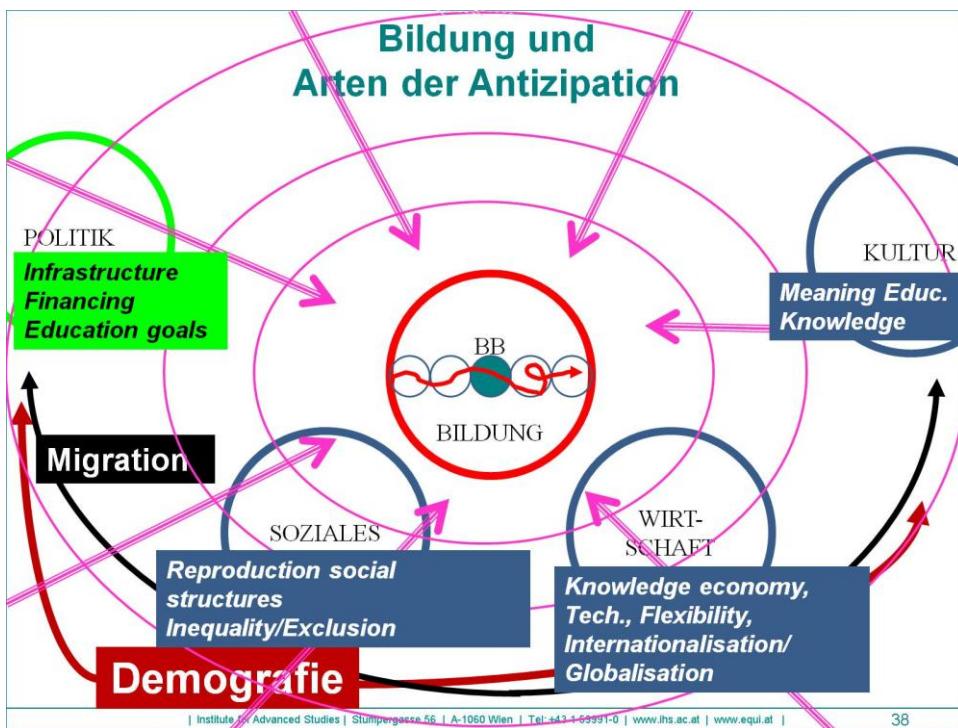


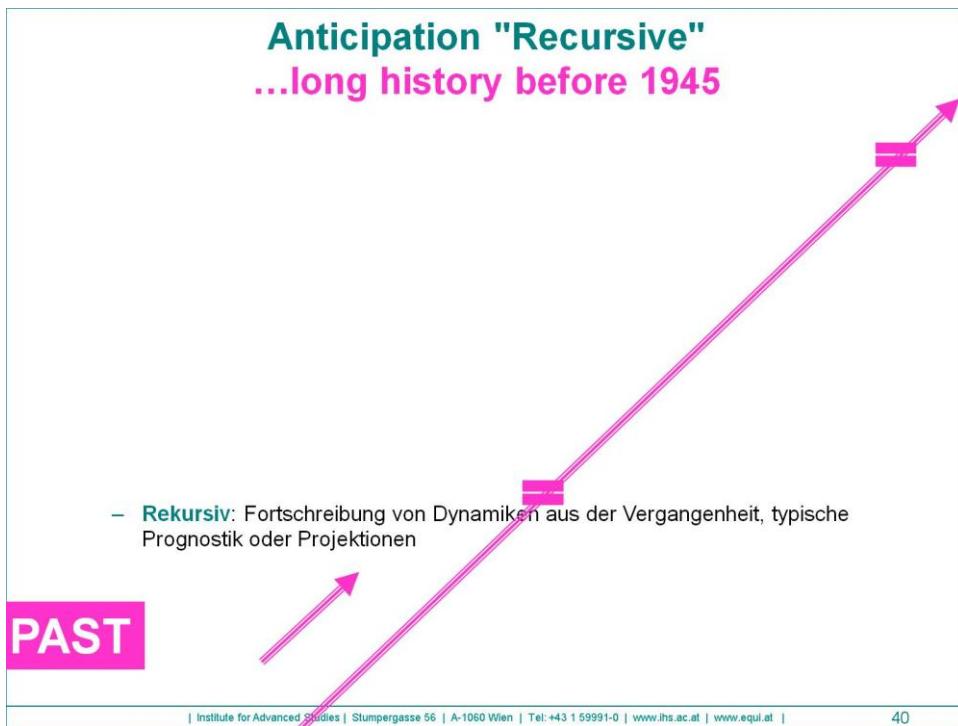
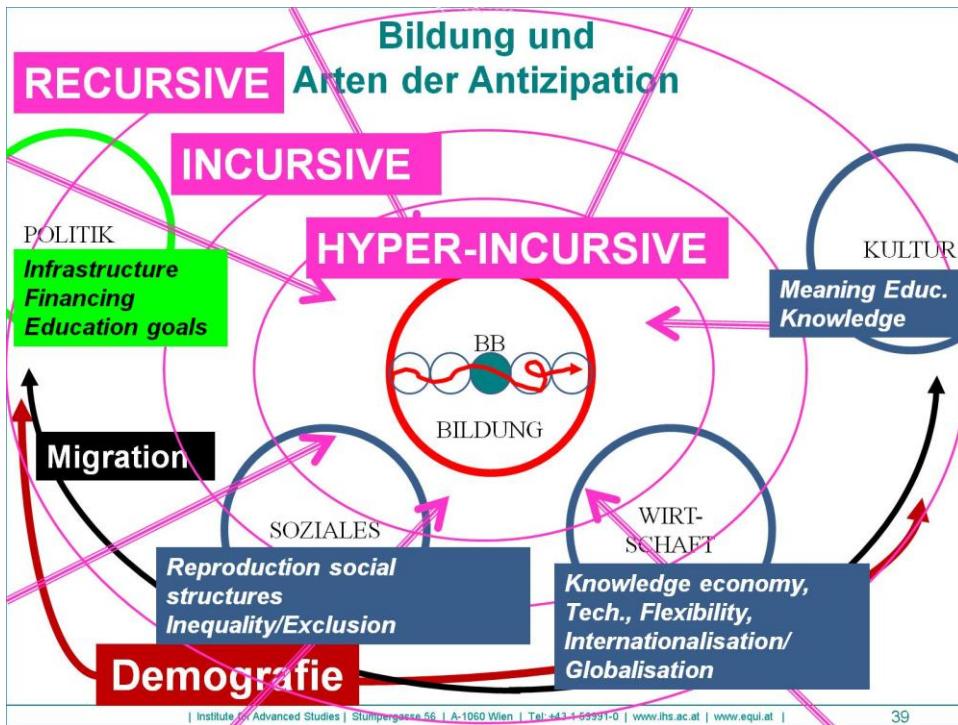


## Step 2

### relating topics to modes of anticipation

- Step 1: Identification/observation of main present topics in different fields related to discourses about future in Austria
- Step 2: Relating these topics to the three modes of anticipation, past-present-future, analysis of main paths, and identification of main influencing factors from the different modes





<b>KULTUR</b>	- „zwei-drei-Kulturen-Theorie“ Wissenschaftsfeindlichkeit (speziell Sozialwissenschaft) - Glaube vor Leistung
<b>SOZIALES</b>	- Konservativ-korporatistisches Wohlfahrtsmodell (Seniorität, Beamte, „unpolit.“) - Männl. Ernährer/weibl. Zuverdienst, Familienförderung
<b>WIRTSCHAFT</b>	- Aufholprozess - Verstaatlichung - Territorialer Verlust, Krise - „Nachzügler“
<b>DEMOGRAFIE</b>	- langfristige Eigendynamik
<b>MIGRATION</b>	- Flüchtlingswellen, „Gastarbeiter“ - gr. Vielvölkerstaat, „nationale Frage“
<b>POLITIK</b>	- Absolutismus, Gegenrevolution, Klassenkampf

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## Anticipation „Incursive, 2nd Republic, 2nd half 20th century

- **Inkursiv:** Fortschreibung von Gegenwärtigem

### PRESENT

Struktur- oder Verhaltensannahmen

<b>KULTUR</b>	-Traditionelle Elitenkultur („die Frauen gehen miteinander ins Konzert“) -Provinzialismus ‚Heimat‘
<b>SOZIALES</b>	-Interne Kostendynamik, Ältere vor Junge -Regulation, ‚wohlerworbene Rechte‘
<b>WIRTSCHAFT</b>	-langsamer Strukturwandel -industrie- und exportlastig, ,medium tech‘
<b>DEMOGRAFIE</b>	-Fertilität schwer beeinflussbar, tw. abh. v. Migr.
<b>MIGRATION</b>	-‘Fremdenskepsis’ -Familienzug -AsylwerberInnen
<b>POLITIK</b>	-Föderal, Konkordanz, Korporatismus, EU

<b>KULTUR</b> - „zwei-drei-Kulturen-Theorie“ Wissenschaftsfeindlichkeit (speziell Sozialwissenschaft) -Glaube vor Leistung	<b>KULTUR</b> -Traditionelle Elitenkultur („die Frauen gehen miteinander ins Konzert“) -Provinzialismus „Heimat“
<b>SOZIALES</b> -Konservativ-korporatistisches Wohlfahrtsmodell (Seniorität, Beamte „unpolit.“) -Männl. Ernährer/weibl. Zuverdienst, Familienförderung	<b>SOZIALES</b> -Interne Kostendynamik, Ältere vor Junge -Regulation, „wohlerworbene Rechte“
<b>WIRTSCHAFT</b> -Aufholprozess -Verstaatlichung -Territorialer Verlust, Krise -„Nachzügler“	<b>WIRTSCHAFT</b> -langsamer Strukturwandel -industrie- und exportlastig, „medium tech“
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<b>MIGRATION</b> -Flüchtlingswellen, „Gastarbeiter“ -gr. Vielvölkerstaat, „nationale Frage“	<b>MIGRATION</b> -Fremdenskepsis -Familienzug -AsylwerberInnen
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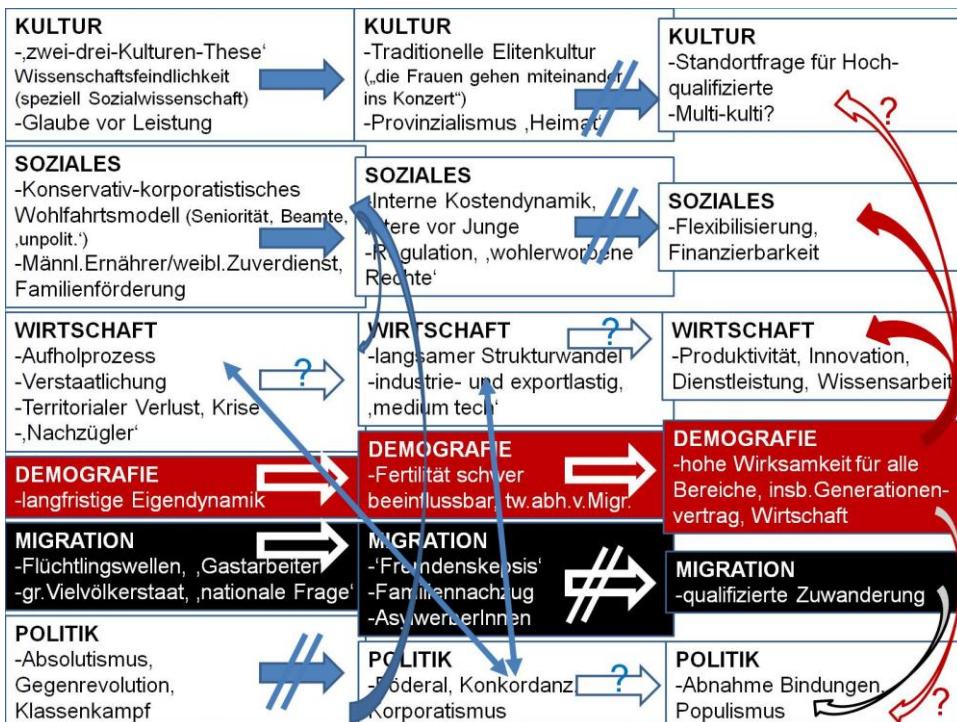
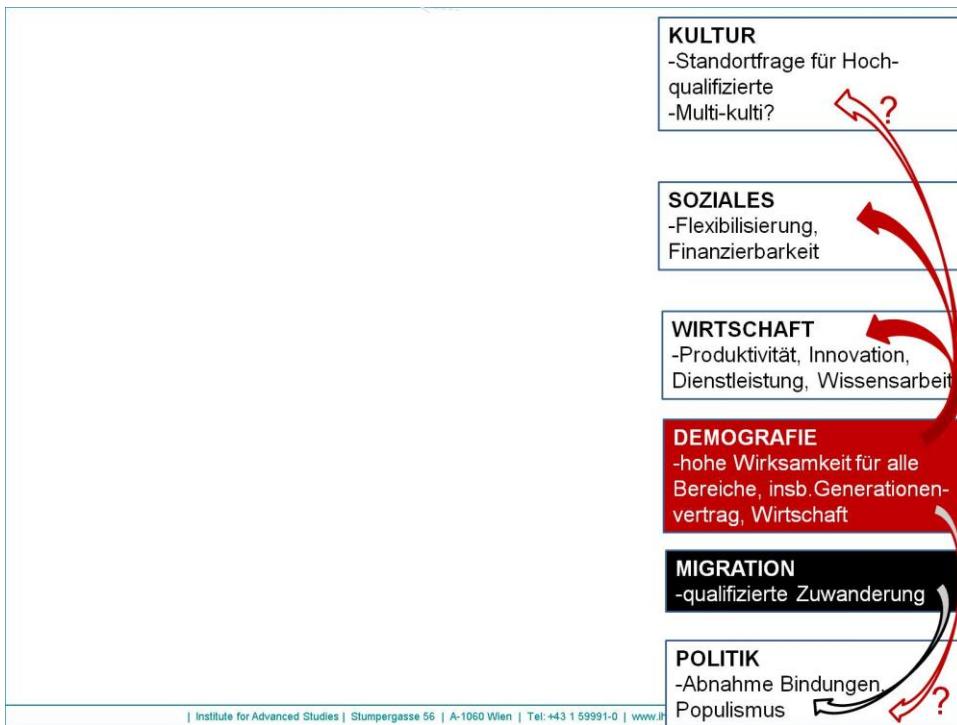
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<b>WIRTSCHAFT</b> -Aufholprozess -Verstaatlichung -Territorialer Verlust, Krise -„Nachzügler“	<b>WIRTSCHAFT</b> -langsamer Strukturwandel -industrie- und exportlastig, „medium tech“
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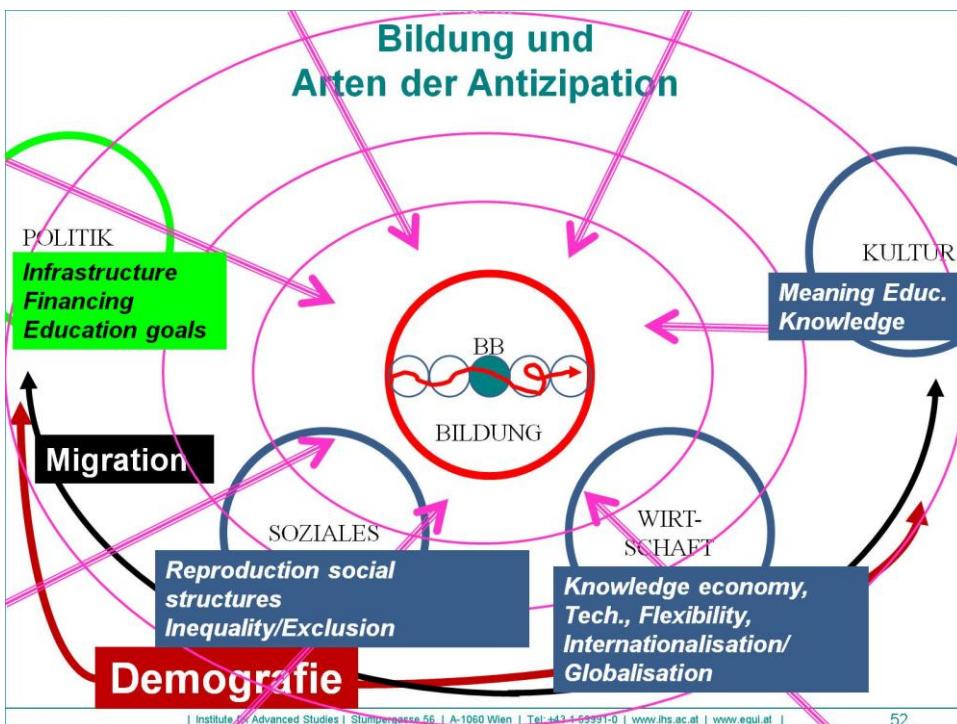
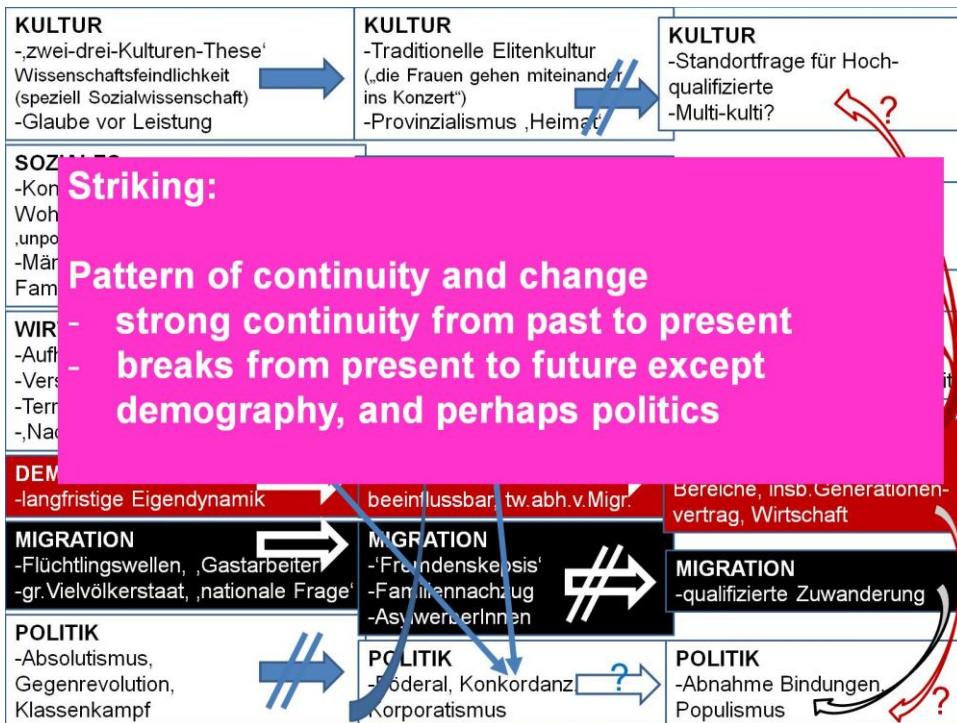
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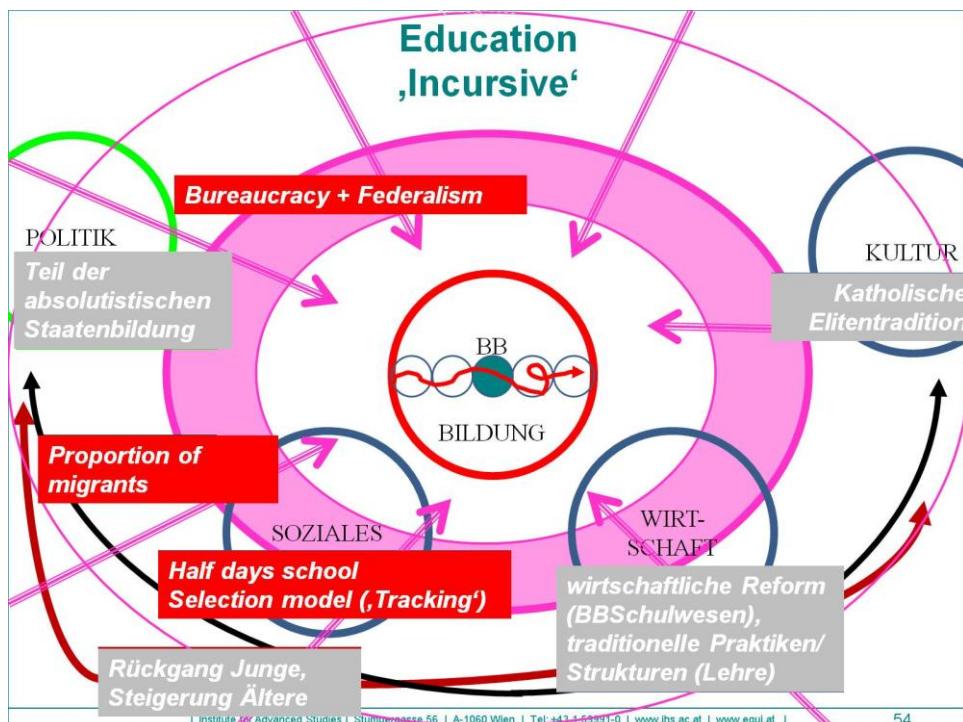
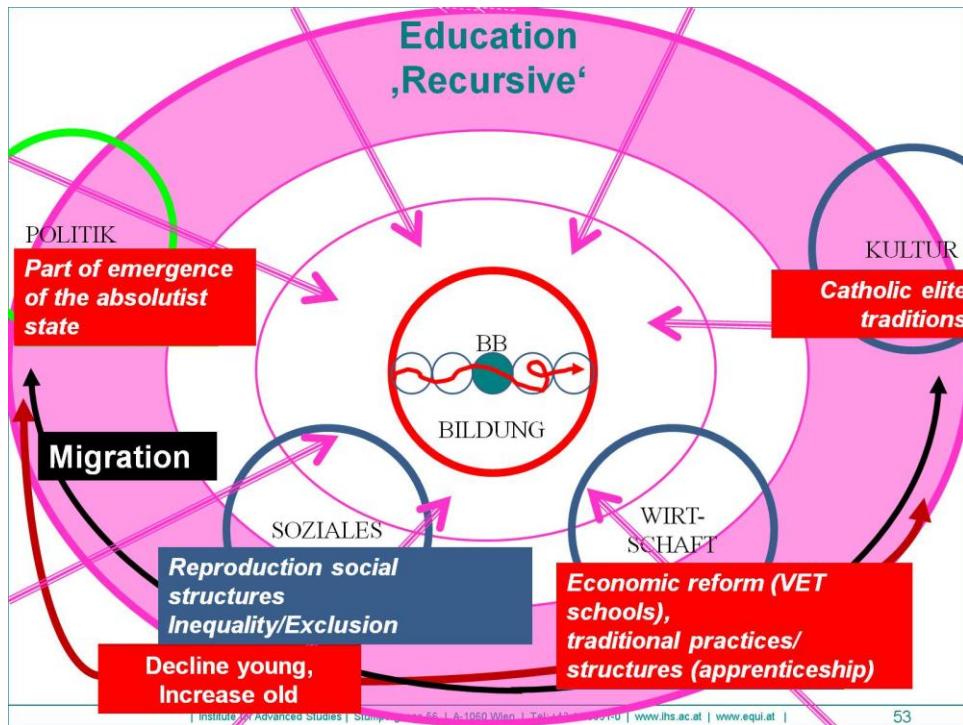
## Antizipation „Hyper-incursive, FUTURE ...from 21st century

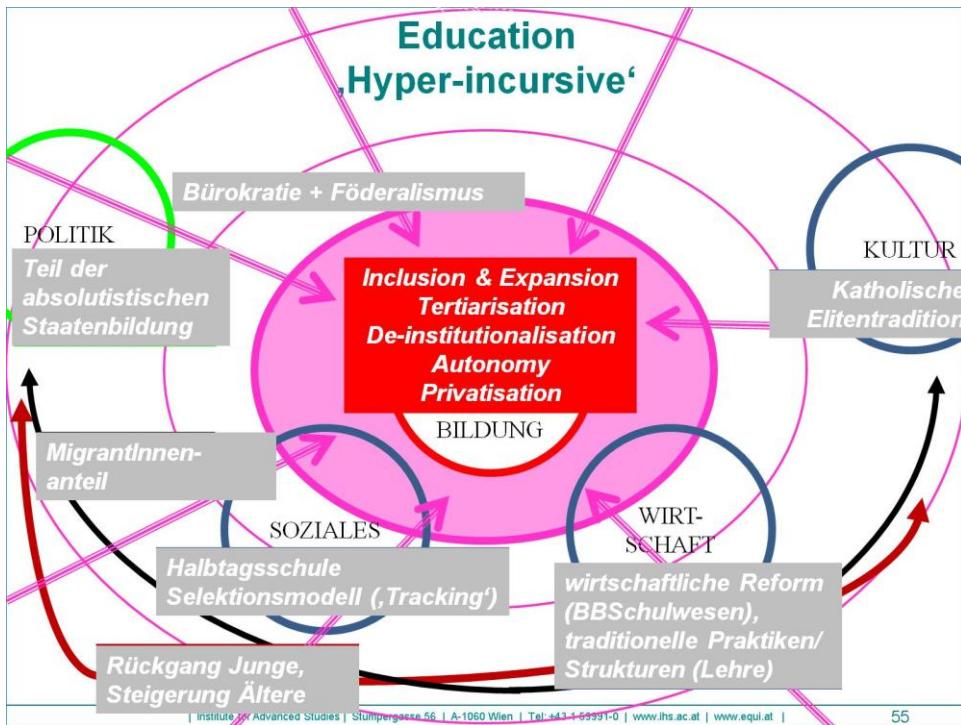
- **hyper-inkursiv:** Verwendung von Erwartungen über die („aus der“) Zukunft, „Szenarien“, Simulationen, Brüche

<b>KULTUR</b>
-Standortfrage für Hochqualifizierte -Multi-kulti?
<b>SOZIALES</b>
-Flexibilisierung, Finanzierbarkeit
<b>WIRTSCHAFT</b>
-Produktivität, Innovation, Dienstleistung, Wissensarbeit
<b>DEMOGRAFIE</b>
-hohe Wirksamkeit für alle Bereiche, insb. Generationenvertrag, Wirtschaft
<b>MIGRATION</b>
-qualifizierte Zuwanderung
<b>POLITIK</b>
-Abnahme Bindungen, Populismus



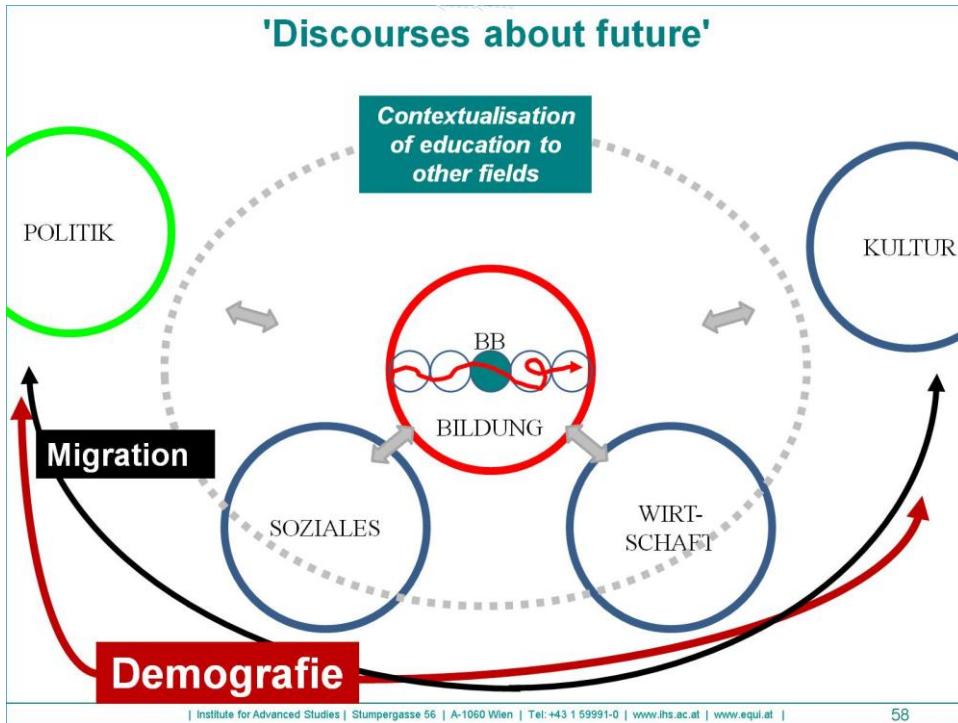
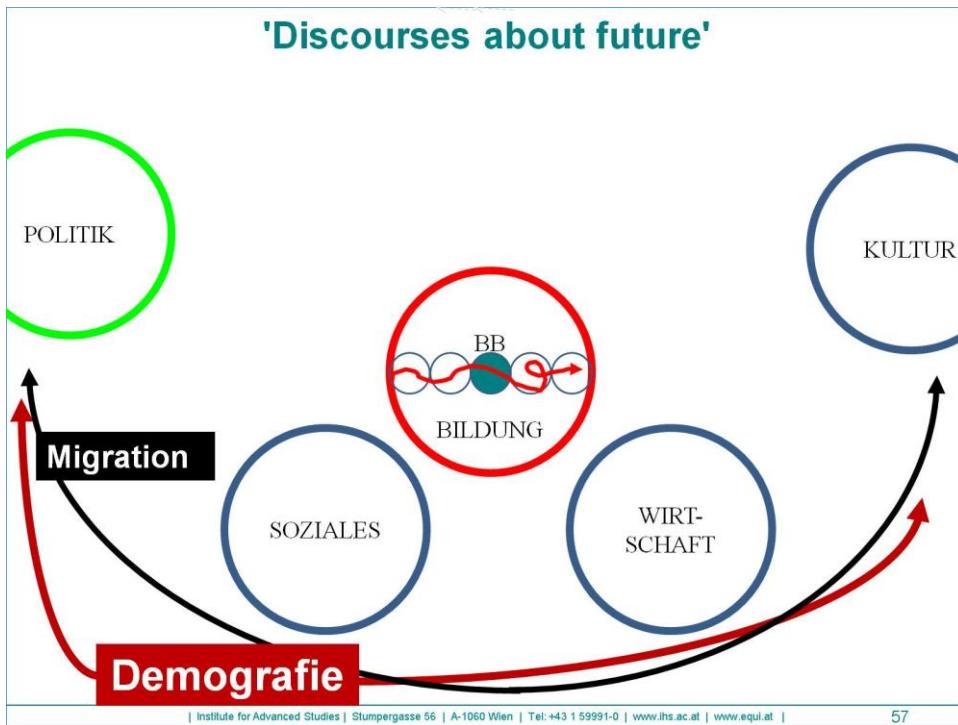


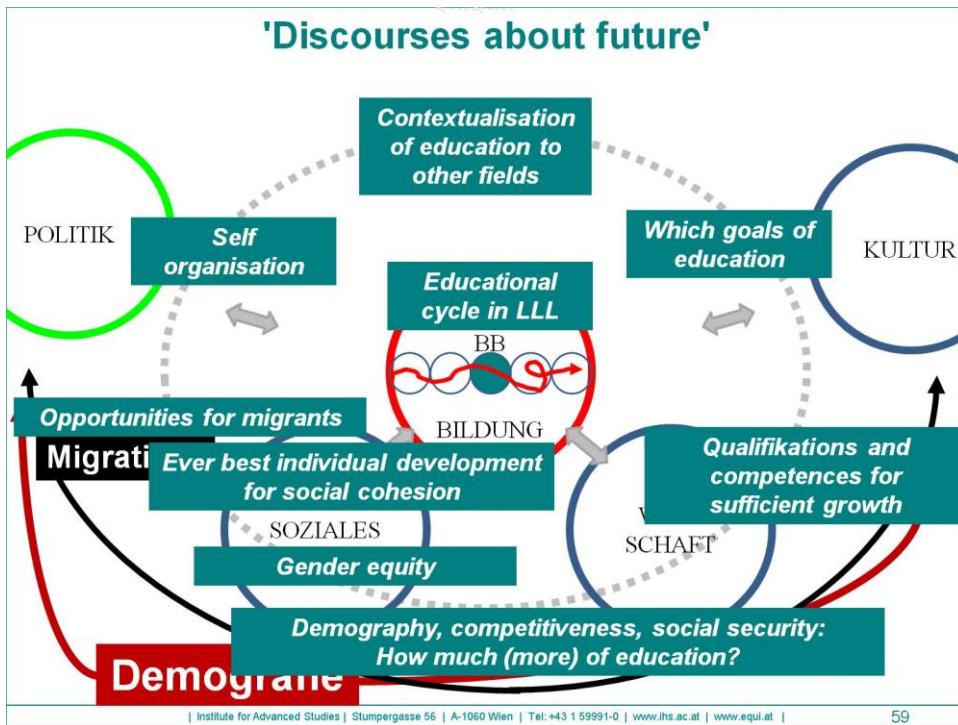




### Step 3 issues and goals of discourses about future

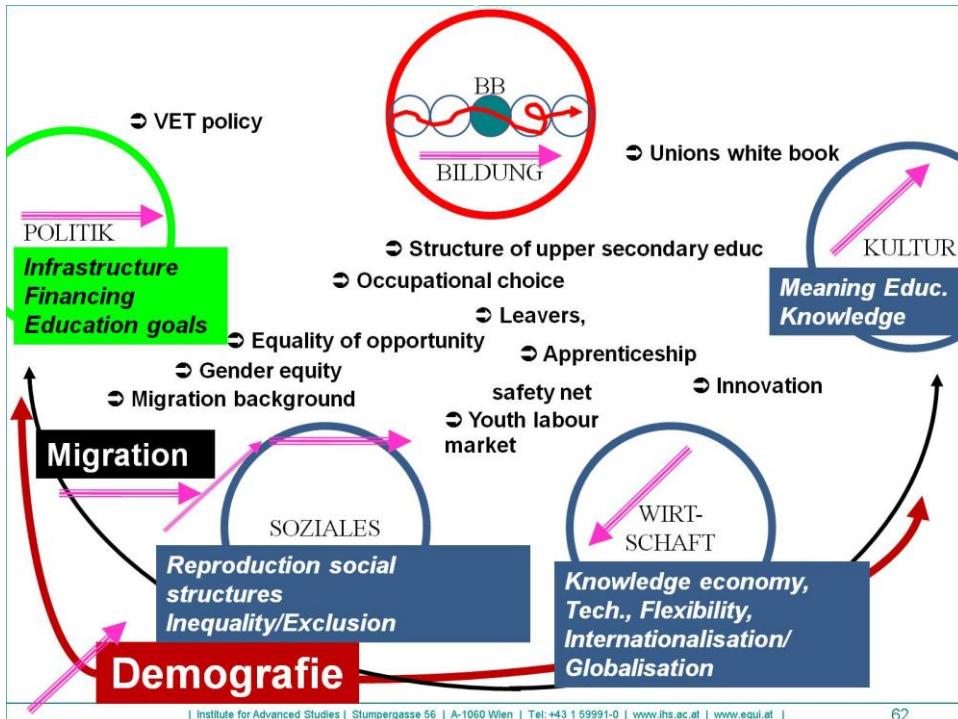
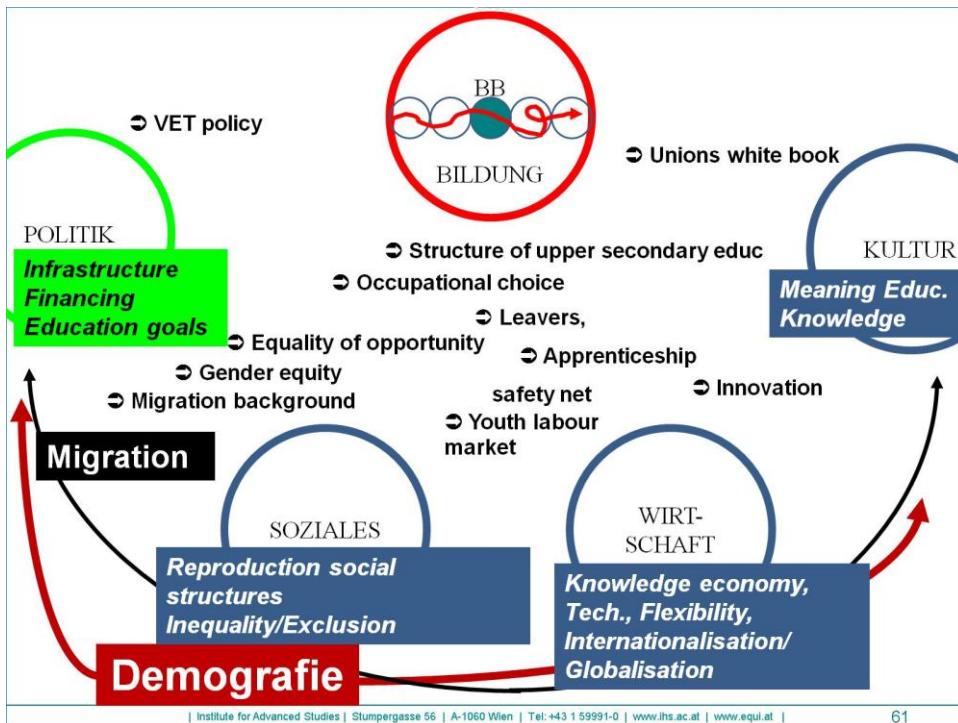
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- Step 2: Relating these topics to the three modes of anticipation, past-present-future, analysis of main paths, and identification of main influencing factors from the different modes
- Step 3: Identification/observation of more concrete issues and goals of discourses about future

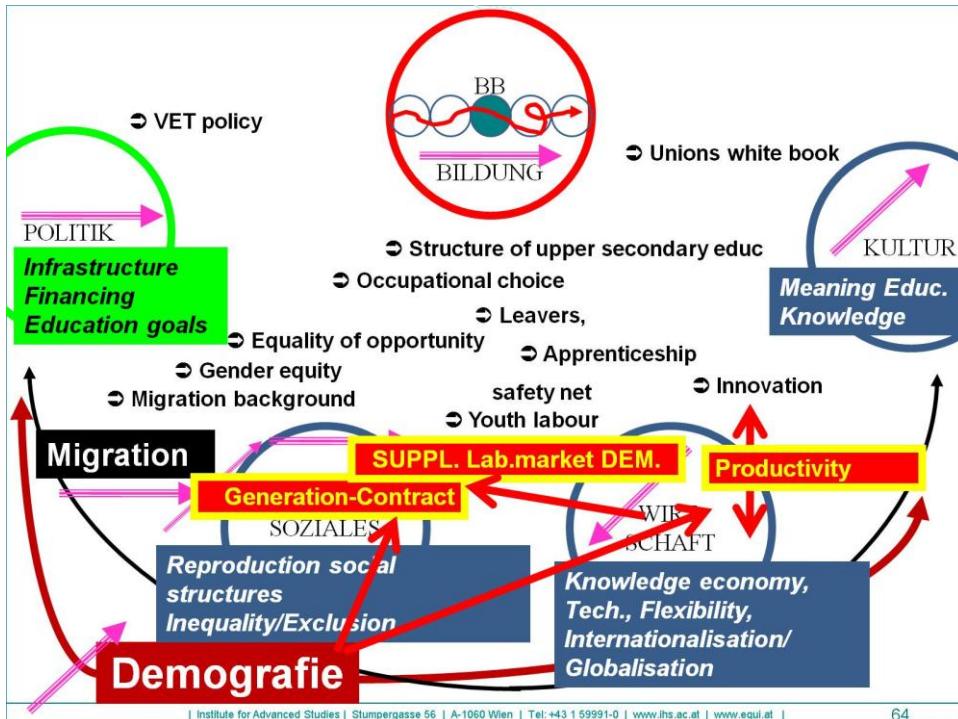
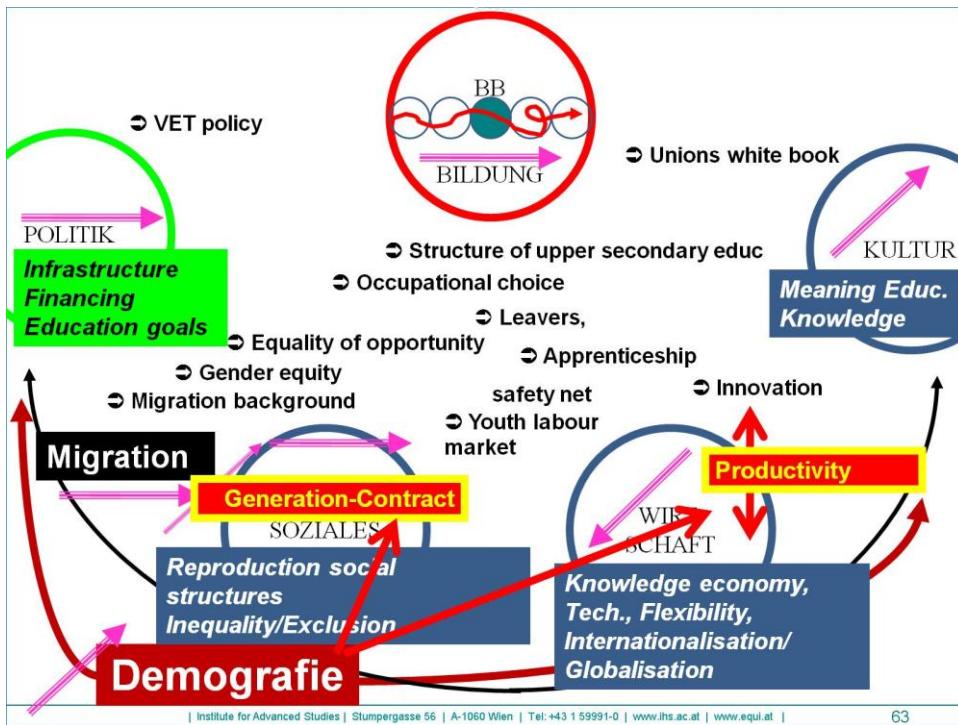


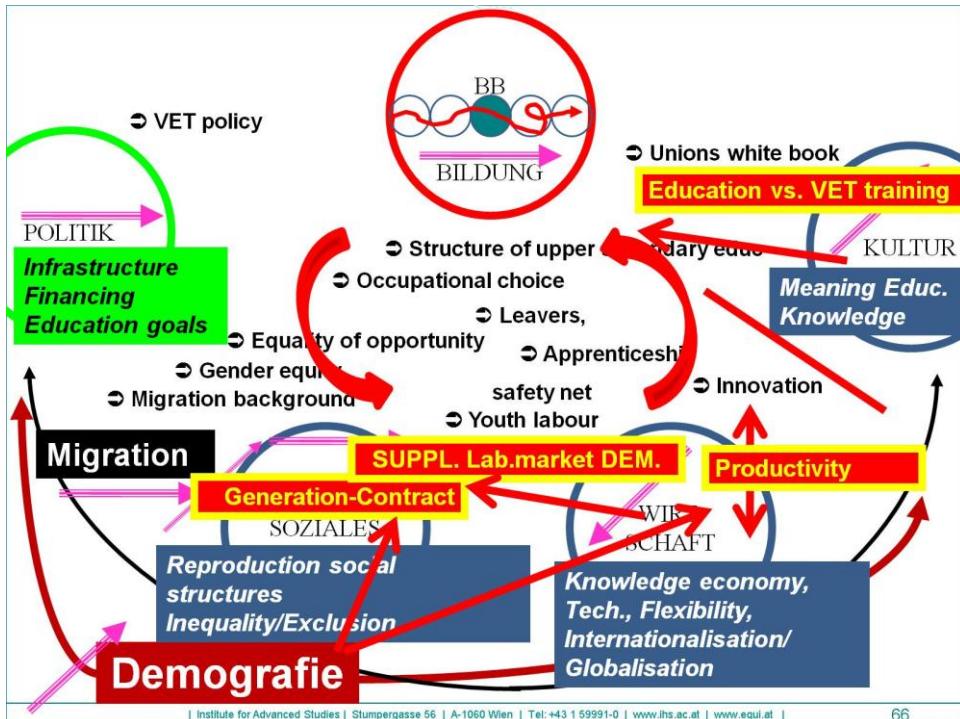
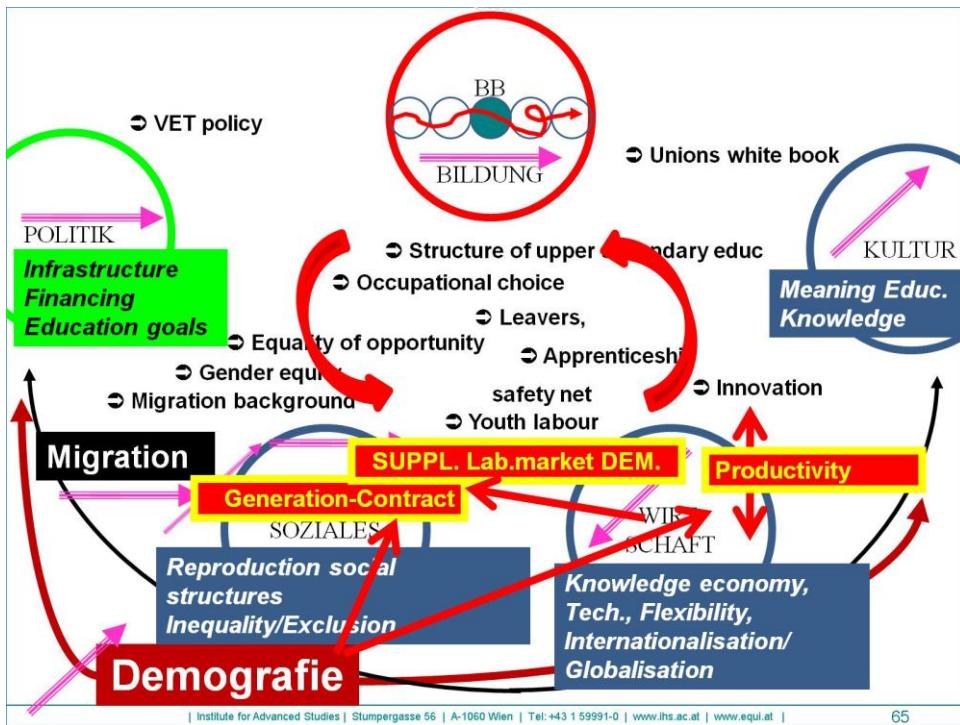


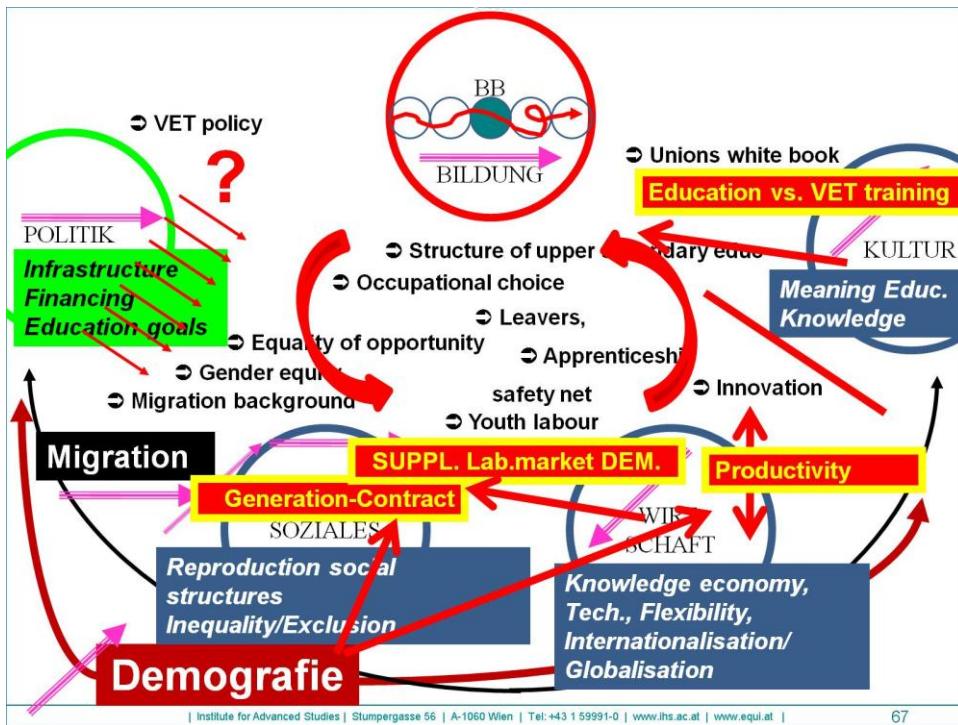
## Step 4 main present policy topics and problems

- Step 1: Identification/observation of main present topics in different fields related to discourses about future in Austria
- Step 2: Relating these topics to the three modes of anticipation, past-present-future, analysis of main paths, and identification of main influencing factors from the different modes
- Step 3: Identification/observation of more concrete issues and goals of discourses about future
- Step 4: Identification of main policy topics and problems articulated by selected experts



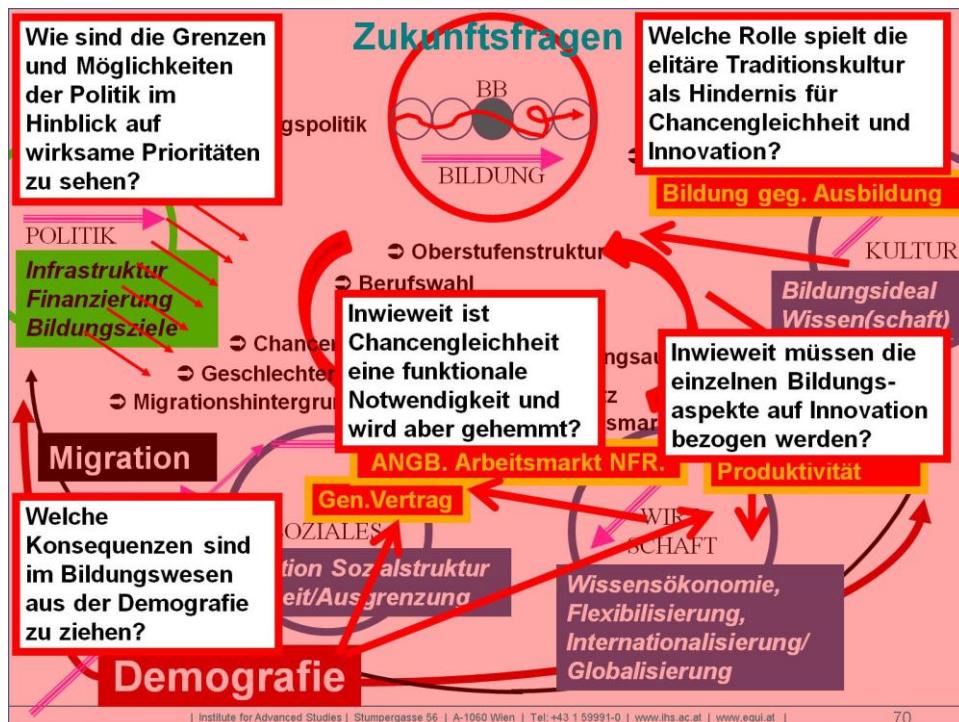
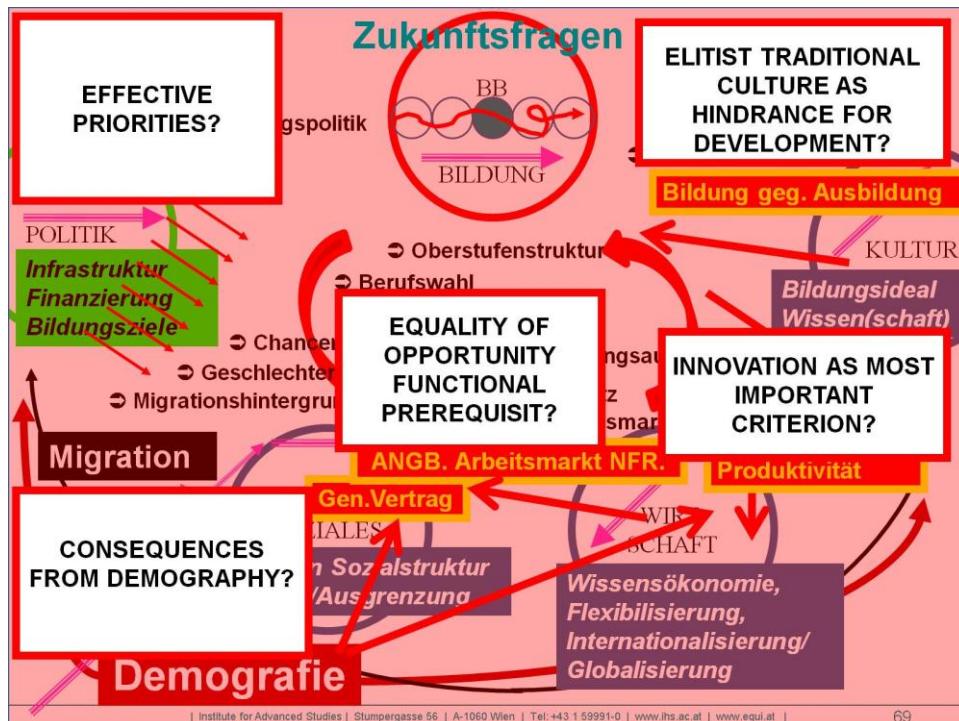






## Step 5 priority areas of VET future

- Step 1: Identification/observation of main present topics in different fields related to discourses about future in Austria
- Step 2: Relating these topics to the three modes of anticipation, past-present-future, analysis of main paths, and identification of main influencing factors from the different modes
- Step 3: Identification/observation of more concrete issues and goals of discourses about future
- Step 4: Identification of main policy topics and problems articulated by selected experts
- Step 5: Synthesising these to some priority areas of VET future



## Messages

- Question: how to find a reasonable and evidence based path in the mess of rhetorics about change?
- Trying out the ‚anticipation‘ approach by Loet Leydesdorff
- Two striking points
  - TIME: Strong historical legacy, and strong break between the incursive and the other modes
  - SPACE: Complexity shown by the combinatoric exercise using the fields; differentiation vs. holism (does the latter hide the complexity?)
- Application to Austria? What learned? Questions?
  - The comprehensive approach works as a kind of checklist, opening up a broad array of aspects and questions, and relates them to each other
  - So far quite reductionist to specific issues, opens many questions, suggests possibly a clear picture which is only stylised
  - Politics hardly capable to digest, building a community for discourse

## Literature

- Leydesdorff L (2008) The communication of meaning in anticipatory systems: a simulation study of the dynamics of intentionality in social interactions. In: Proceedings of the 8th International Conference on Computing Anticipatory Systems (CASYS‘07), 6-11 Aug. 2007, Liège, hg. D M Dubois, Melville, NY (<http://www.leydesdorff.net/casys07/casys07.pdf>);
- Füllsack M (2009) Antizipation und ihre Formalisierung. Zur Simulation sozialer Systeme nach Loet Leydesdorff, ÖZS 34(3), 62-81.

## The End



## Material

