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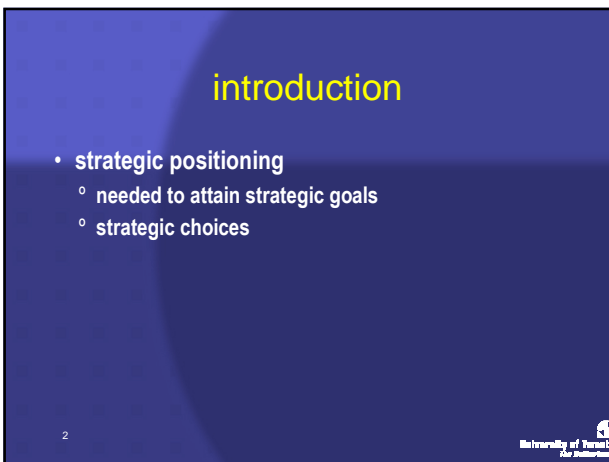
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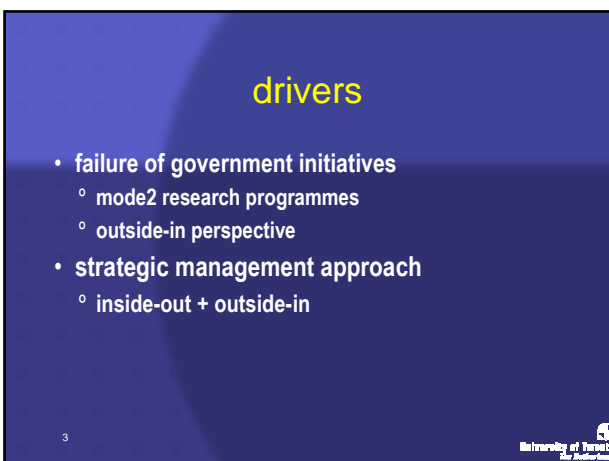
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## strategic position

- strategic interdependence (SI)
  - sharing of heterogeneously distributed strategic resources
- organisational autonomy (OA)
  - self-governance in deciding about research goals and directions

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## modes of positioning of researcher

		need for organisational autonomy (OA)	
		low	high
need for strategic interdependence (SI)	low	mode0	mode1
	high	mode2	mode3 – research entrepreneur

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## testing strategic positioning theory

- if SI, OA affect production of knowledge
- research environment
  - nanotechnology institute at the University of Twente
    - 237 fte
- 28 interviews

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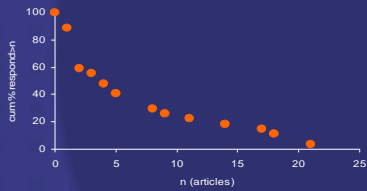
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## production of knowledge

(number of articles 2003-2007 normalised per working year)



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## measurement of strategic interdependence

- depending on colleagues in writing articles
- depending on colleagues in acquiring scientific information

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## measurement of organisational autonomy

- deciding on research goals
- deciding what to write
- acquiring scientific information
- deciding what relevant references include in articles
- deciding when the work is ready to be published
- deciding where to submit article

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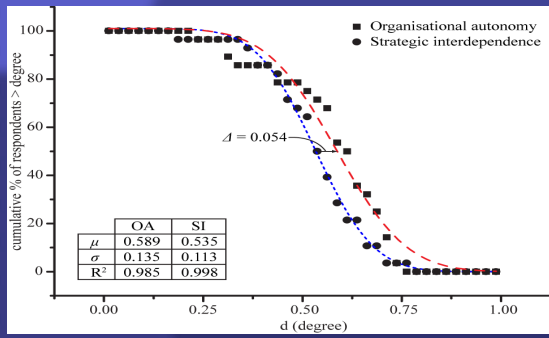
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## distribution of SI & OA



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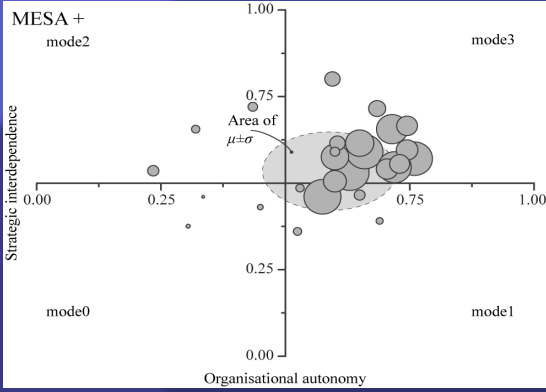
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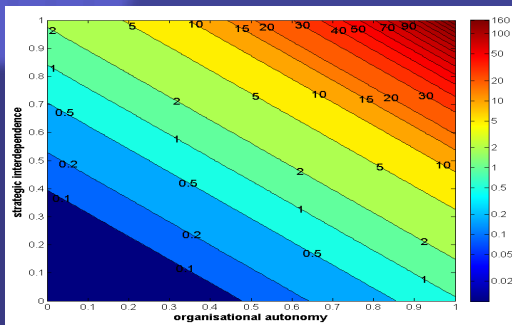
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## predicted production of knowledge



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## knowledge dynamics

- Bonaccorsi on knowledge dynamics
  - need for observables
  - need for including changes in science
- ⇒ strategic positioning
  - mechanisms
  - content related
    - growth rate (*dependent variable*)
    - diversity of fields
    - complementarity

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## measurement of strategic interdependence

- interaction with scientists (institutional complementarity)
  - sharing research facilities
  - joint initiatives
  - sharing knowledge
- sharing cognitive approaches (cognitive complementarity)
  - sharing methods, theories, hypotheses

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## measurement of organisational autonomy

- studying instrumentation, methods
- choice of topics, methods
- decisions regarding use of methods, theories, instrumentation, etc.
- motives to study certain topics, phenomena
- relation to other disciplines
- problem solving

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## research management & policy

- gap  $\Rightarrow$  managerial tool  
 $\Rightarrow$  management interventions
- changes in scientific disciplines
- allocation of resources

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