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Nanotechnology futures in India, South Africa, and Kenya

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Outline

1. Situated construction of expectations
2. Methodology
3. Preliminary findings
 - India
 - South Africa
 - Kenya

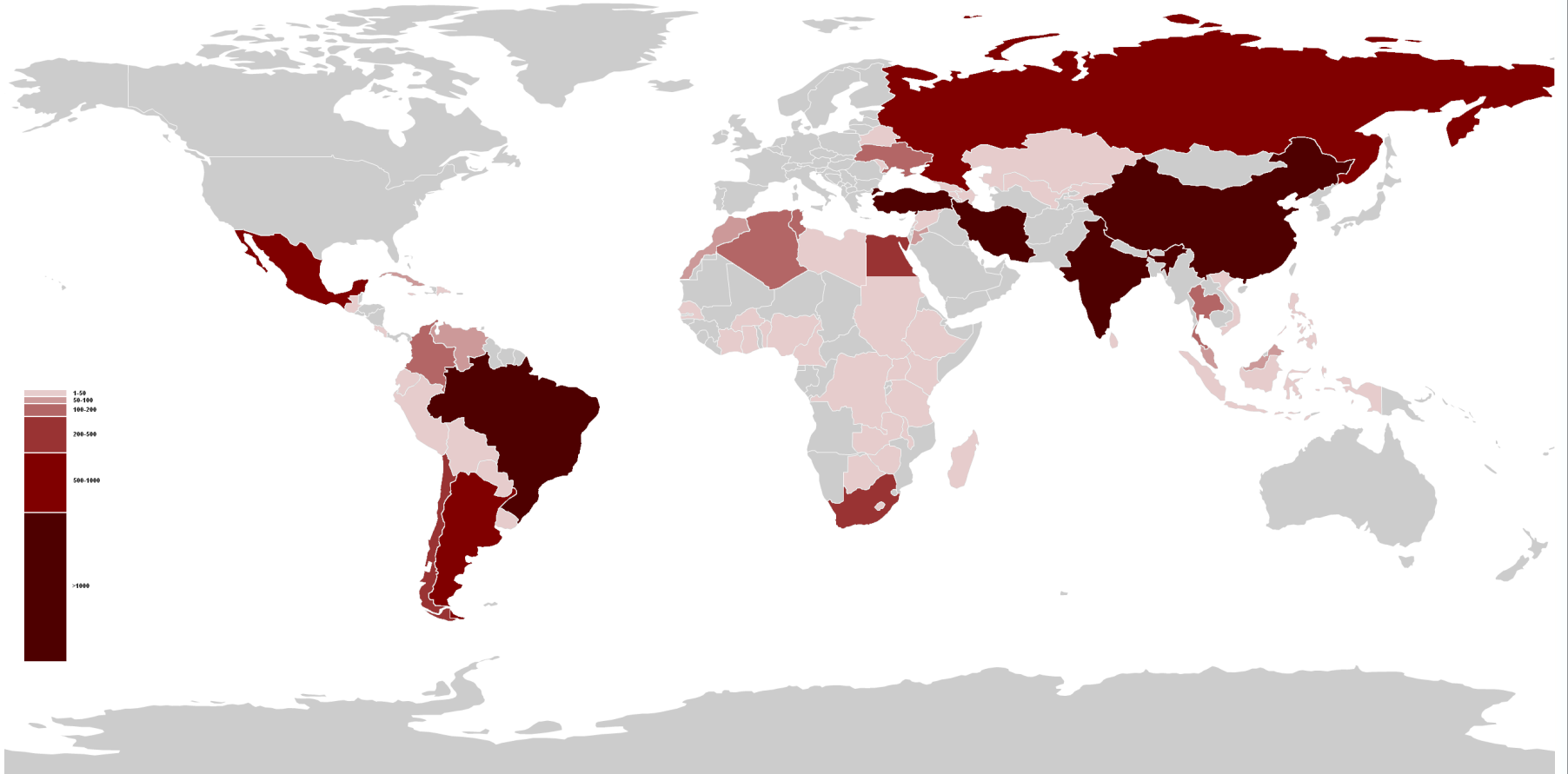
Authors	Place
Van Lente & Rip 1999	Japan, Europe, US & Netherlands
Van Lente 2000	Unspecified
Deuten & Rip 2000	Netherlands
Brown 2000	Unspecified
Wyatt 2000	United States
Geels & Smit 2000	Unspecified
Rose 2000	Western democracy
De Laat 2000	Unspecified
Sanz-Menendez & Cabello 2000	Unspecified
Ling 2000	United Kingdom
Brown & Michael 2000	United Kingdom
Brown 2003	Unspecified
Borup et al. 2006	Unspecified
Berkhout 2006	Unspecified
Konrad 2006	Germany

Authors	Place
Losch 2006	Germany
Merkerk & Robinson 2006	Unspecified
Nerlich & Halliday 2007	United Kingdom
Horst 2007	Denmark
Thurs 2007	United States
Truffer et al. 2008	Germany
Selin 2008	Unspecified
Van Lente & Van Til 2008	German regions
Robinson 2009	Europe
McGrail 2010	Unspecified
Pollock & Williams 2010	United States
Selin & Hudson 2010	United States
Van Lente & Bakker 2010	Unspecified
Ruef & Machard 2010	German speaking Europe

Why study the 'non-West'?

1. New technologies are said to be important for development
2. Different context may yield different expectation dynamics
3. New technologies (also) emerge outside the 'West'

Nanotechnology publications (2009)



Methodology and sources

- Interviews
 - Over 45 interviews
 - Various actors
- Publically available documents
 - Fieldwork
 - Internet search
 - Snowballing

Nanotechnology

- 'Understanding and control of matter at the nano-scale'



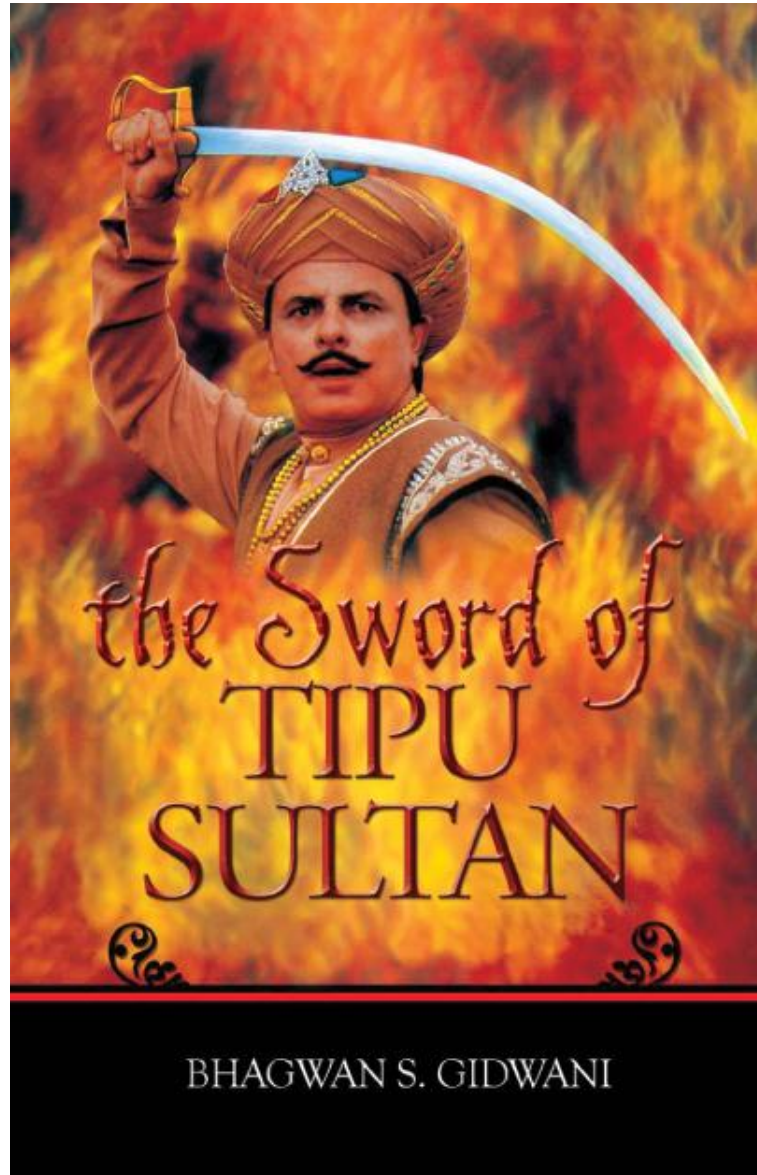
Expectations in India

- Powerful individuals
 - Abdul Kalam
 - C.N.R. Rao



Expectations in India

- Huge expectations
- Inevitable benefits
 - ...but not for India
 - only *if* they act quickly
 - unlike with semiconductors
- Only in its infancy
 - ... yet has a long history in India



Expectations in India

- Technology-centered
- Aim to be technological world leader
- Downsides absent for long time
 - Risk slowly came in by civil society

Expectations in South Africa

- South African Nanotechnology initiative (SANi)
- International developments
 - Strengthen promises
 - Risk South African interests
- Nanotechnology contributes to:
 - Industrial development
 - Societal development



Expectations in South Africa

- Only in its infancy
 - ...but very uncertain
- Impression: less far into the future
- Risk recently on agenda
 - Smoothly taken up and translated into action

Expectations in Kenya

- Collective expectations since 2009
- Lack of awareness

Conclusion?

- Remaining:
 - Compare to nanotechnology expectations in Western Europe and Northern America
 - Situate expectations in local and global contexts
- Diverse expectations

Thank you!

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<http://www.nano-dev.org>

Future

- Relate the various variables
- Trace developments over time
- Situate developments
- Comparison with Netherlands and Kenya

Why study the 'non-West'?

1. New technologies are said to be important for development
2. Different context may yield different expectations
3. New technologies (also) emerge outside the 'West'
→ **nanotechnology in India, South Africa and Kenya**