

# **Governance of Science and Technology through an Ability Studies Lens**

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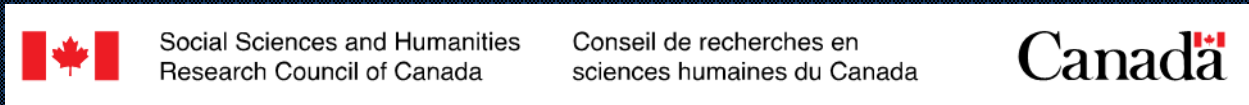
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# My Students The Wolb Pack

A Collaborative Interdisciplinary Student Research Team

[http://www.crd.s.org/research/faculty/Gregor\\_Wolbring.s.html](http://www.crd.s.org/research/faculty/Gregor_Wolbring.s.html)





## The Pack



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The Pack **Ability Studies**

**Ability Studies: Investigates the cultural  
dynamic of  
Ability expectation (want)  
and Ableism (need)**



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**Ableism**

Privilege

Conclusion

- The term ableism evolved from the disability rights movements in the United States and Britain during the 1960s and 1970s
- As used within the disability rights movement and disability studies It questions the expectation of 'species -typical body-linked abilities' while labelling 'sub species-typical abilities' as deficient, as impaired and undesirable often with the accompanying disablism (Miller, Parker, and Gillinson 2004), the lack of accommodation enthusiasm for the needs of people and other biological structures who are seen to not have certain abilities; the unwillingness to adapt to the needs of 'others'
- However ableism goes beyond body ability expectations
- Ableism also as such is not negative it just highlights that one favours certain abilities and sees them as essential.

- Ableism is one of the most societal entrenched and accepted isms and one of the biggest enabler for other isms
  - Sexism
  - Racism/Ethnicism/
  - Caste-ism
  - Age-ism
- Ableism driven Speciesism
- Ableism driven Anti-Environmentalism Anthropocentric versus Biocentric; Ecuador first Biocracy
- Gross domestic product (GDP)-ism
- Consumerism
- Productivity-ism
- Competitiveness-ism



## The Pack **Ability Studies**

- Ability Studies allows to investigate eco-ability expectations and eco-ableism that focuses on ecological dynamics of human-human; human-animal and human-environment relationships.
- Ability Studies allows for the study of multiple subject formations, social relationships, and lived experiences based on diverse ability expectations and the actions linked to such expectations.
- It encourages the study of how legal, ethical/moral, biological, cultural and social constructs are exhibiting ability expectations and how such ability expectations and the actions they trigger leads to an ability based and ability justified understanding of oneself, one's body and one's relationship with others of one's species, other species and one's environment.
- It allows for the investigation of ability expectations exhibited not only by individuals but also by countries and cultures
- It allows for the investigation of which ability expectation can positively reinforce another ability expectation; which are in conflict with each other and which are neutral to each other
- Ability studies can be used in inter-, trans- and intra- disciplinarily ways to generate policies and advance the relationship between humans, animals and their environment.



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Ability Studies

**Ethics and Ability  
expectations**

- Ethics codes, theories and principles are intended to help society to deal with emerging issues such as the governance of scientific and technological advancements.
- They are linked intricately to abilities needed to make a given ethics code, theory or principles operational
- A given ethics theory, code or principle privileges certain abilities and as such its uptake correlates with the privileging certain ability expectations.
- Privileging certain ability expectations were and are one trigger for the development of ethics theories, codes and principles;



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Ability Studies

Ethics and Ability  
expectations

**Governance**

# Governance of S&T through an Ability Studies lens:



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Ethics and Ability  
expectations

**Governance**

• **Question: What is the impact of a given S&T on Ability inequality and Ability InEquity?**

• **Ability inequality is a descriptive term denoting any uneven distribution of access to and protection from abilities generated through human interventions, right or wrong (modified from Cozzens ).**

• *Ability inequality* is a descriptive term denoting any uneven judgment of abilities intrinsic to biological structures such as the human body, right or wrong modified from Cozzens ).

• *Ability inequity* is a normative term denoting an unjust or unfair distribution of access to and protection from abilities generated through human interventions (modified from Cozzens).

• *Ability inequity* is a normative term denoting an unjust or unfair judgment of abilities intrinsic to biological structures such as the human body (modified from Cozzens).



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Ethics and Ability  
expectations

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- Question: What is the impact of any given S&T on Ability Security?

- Ability security means that one is able to live a decent life with whatever set of abilities one has, and that one will not be forced to have a prescribed set of abilities to live a secure life (e.g. even if one doesn't have the ability to walk, he or she should be able to secure employment).

- Example: According to the US bureau of labor statistics January 2014 the employment to population ratio for disabled people age 16-64 years is 25.5% for men with disabilities and 22.8% for women with disabilities These numbers included people who look for work but cannot find work and people who do not look for work. The equivalent numbers for so called non-impaired people are 75.3% for men with disabilities and 65.7% for women

- <http://www.bls.gov/news.release/empsit.t06.htm>



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- **Question: What is the impact of a given S&T on Self-Identity security?**
- Self-identity security could be seen as a subset of personal security and means that one is accepted with one's set of abilities and that one should not be forced (physically or by circumstance) to accept a perception of oneself one does not agree with (e.g. one is not expected to have the ability to walk or is seen as a "deficient product" if one cannot walk).
- **If we for example look at the academic literature of social robotics or brain machine/brain computer interfaces the language is nearly exclusive following a medical understanding of disabled people and the purpose of restoration.**

**The narrative is not indicating the ability expectation of decreasing the social discrimination ability diverse people experience**



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**Governance**

- Question: Which ability expectations drive a given S&T
- A 2006 Association for the Advancement of Science workshop looked into the dynamic of human enhancement and concluded that the following ability desires are the main drivers for human enhancements: 1) to keep one's local and global competitive advantage; 2) to live securely; and 3) to maintain one's quality of life and one's consumer life-style.



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Ability Studies

Ethics and Ability expectations

**Governance**

- Question: Which ability expectations drive a given S&T and its governance?

The screenshot shows the top navigation bar of the Scientific American website. On the left is the logo "SCIENTIFIC AMERICAN™". To its right are links for "Sign In | Register" and a search bar with the text "Search ScientificAmerican.com". Further right is a "Subscription Center" with options: "Subscribe to All Access »", "Subscribe to Print »", "Give a Gift »", and "View the Latest Issue »". Below this is a horizontal menu with categories: "Subscribe", "News & Features", "Topics", "Blogs", "Videos & Podcasts", "Education", "Citizen Science", "SA Magazine", "SA Mind", and "Books". Below the menu, there is a link "More Science » Forum" and utility links "7 :: Email :: Print".

## Is Social Science Research in the National Interest?

A battle is raging in the House of Representatives over an effort to clip the National Science Foundation's wings

May 21, 2014 | By Rep. Lamar Smith, Peter McPherson and Hunter Rawlings

Today the science committee of the U.S. House of Representatives will begin debate on a bill key to national research funding and priorities. The Frontiers in Innovation, Research, Science and Technology (FIRST) Act of 2014 (H.R. 4186) would, among other things, require the National Science Foundation to cut research for social sciences and economics and certify to Congress that each taxpayer-funded grant it issues is in the national interest.

Last week *Scientific American* published an interview with Neal Lane, a former White House science advisor, that was critical of the FIRST Act. Rep. Lamar Smith (R-Texas), chair of the House Science, Space and Technology Committee and co-sponsor of the FIRST Act, contacted us and asked for a chance to respond. We publish Rep. Smith's essay below along with a commentary on the FIRST Act by Hunter Rawlings, president of the Association of American Universities, and Peter McPherson, president of the Association of Public and Land-grant Universities.—*The Editors*



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Ability Studies

Ethics and Ability  
expectations

**Governance**

- Question what ability expectation does S&T support?
- Democratizing Nano versus Nano for furthering democracy
- To better connect science and democracy, there must be a way for society to guide the developments of science. Pirtle 2006
- To better allow for democracy to decide what good science should achieve, a serious and proactive
- assessment of the possible implications of scientific work is needed in order to make informed, democratic
- decisions (2). Pirtle 2006
- “The first focus of converging technologies should be on the benefits to individuals and society in general. Good indicators of success are the quality of life, health, safety, and how humanely and **democratically the benefits are distributed. Application of democratic principles for equal opportunity, access to information, knowledge and development are other challenges.** This report is based on scientific evidence and underlines the need to respect the human condition, democracy, and serving human needs. Optimizing societal interactions, R&D policies and risk governance for the converging new technologies **can enhance economic competitiveness and democratization.**” (Roco 2008)



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- Question:
- Which S&T products have been influential so far in supporting abilities seen as essential for Democracy?
- Which S&T products could be influential in supporting abilities seen as essential for Democracy?
- Which S&T products have been detrimental so far in regards to abilities seen as essential for Democracy?
- Which S&T products could be detrimental in regards to abilities seen as essential for Democracy?



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- Does a given S&T product decrease, increases or maintains existing levels of Ability privileges?
- Does a given S&T generate new Ability Privileges? If Yes for whom?



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Ability Studies

Ethics and Ability expectations

**Governance**

- Governance/ Anticipatory governance assume many abilities of the stakeholders

Keywords	EBSCO (all)(abstract)	Scopus (title, abstract, keyword)	Science direct (title, abstract, keyword)	Web of Science (topic)	Google Scholar
Social work	156,908	33786	871	17422	1,480,000
+”social robot	0	0	0	0	27/5 relevant
+brain machine interface	0	0	0	0	12/0 relevant
+brain computer interface	1	0	0	0	55/1 relevant
+human enhancement	0	0	0	0	0 relevant
+Neuro/cognitive enhancement	0/3	0/7	0/0	0/2	27(0relevant) /
+Technology governance/governan ce of technology	0/0	0/0	0/0	0/0	91/6 but none relevant



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**Governance**

- Vision of purpose of social work education
- facilitating the transaction between individuals and their environments for purposes of problem solving (Parsons, 1991)
- empowerment (Parsons, 1991)
- to promote recovery, restore individual, family and community well-being, enhance development of each individual's power and control over his or her life and advance principles of social justice (McGarry, 2014)
- addressing need in the light of people's lived experience (Cox, 2002);
- "to advocate for, and/or with people changes in those policies and structural conditions that maintain people in marginalized dispossessed and vulnerable positions" (Rock, 2013) ;
- to enhance people's well-being (Knauth, 2014);
- to increase betterment of living conditions of a client, a family, or a community (Soydan, 2011);
- Understand the mechanisms of oppression and discrimination. (Qatar University Social work program, 2014)
- Apply strategies of advocacy and social change to advance social justice (Qatar University Social work program, 2014) .



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Governance

**Conclusion**

## • **Conversation between Alex D and Paul Denton**

- **Paul Denton:** If you want to even out the social order, you have to change the nature of power itself. Right? And what creates power? Wealth, physical strength, legislation — maybe — but none of those is the root principle of power.
- **Alex D:** I'm listening.
- **Paul Denton:** Ability is the ideal that drives the modern state. It's a synonym for one's worth, one's social reach, one's "election," in the Biblical sense, and it's the ideal that needs to be changed if people are to begin living as equals.
- **Alex D:** And you think you can equalise humanity with biomodification?
- **Paul Denton:** The commodification of ability — tuition, of course, but, increasingly, genetic treatments, cybernetic protocols, now biomods — has had the side effect of creating a self-perpetuating aristocracy in all advanced societies. **When ability becomes a public resource, what will distinguish people will be what they do with it. Intention. Dedication. Integrity. The qualities we would choose as the bedrock of the social order. (*Deus Ex: Invisible War*)**

Your turn  
Any questions?

