

Room 4018+4019, 11.30am - 12.45pm

Engaging Universities

David Budtz Pedersen (Chair)

Jack Spaapen Amanda Anderson







Engaging Universities

David Budtz Pedersen (Chair) Director, Humanomics Research Center, Denmark.







Engaging Universities in Impact Investment

David Budtz Pedersen PhD Professor of Impact Studies & Science Communication Aalborg University Copenhagen

18 October 2019 AESIS SSH Impact | Smithsonian



AALBORG UNIVERSITET

The four I-s of Research-Business Impact

- 1. INVESTING IN IMPACT. Alignment of mission statement (strategy/values) impact profile and indicators.
- 2. INCENTIVES. Without emphasis on incentives, recognition, and impact awards, most research-2-business activities in SSHA will not occur.
- 3. INTERMEDIARIES. Roles and skill-sets needs to be cultivated and updated with on-demand services, training and knowledge hubs/brokers.
- 4. INFRASTRUCTURE. Better, more robust data about impact activities used to learn from best practices and inform new strategies and instruments.



Humanomics Research Centre 2019

Impact Investing

- Investments "made into companies, organizations, and funds with the intention to generate measurable, beneficial social or environmental impact" alongside and beyond financial return." (2017 Annual Impact Investor Survey)
- Provides resources for researchers to create companies, collaborate or co-create solutions, which fall within the university's attempt to address societal challenges.
- Impact investing can help organizations carry out their projects and initiatives without having to rely heavily on subsidies or venture capital e.g. philanthropy.



Impact Investing

- Building an impact investment culture in SSH is crucial for the success of any attempt to commercialize research output & partnerships.
- Impact investing universities actively seek to address societal issues by creating new or collaborating w./ established businesses (service, consultancy, ICT, healthcare, education etc.).
- Proactive strategies include creating an entrepreneurial culture (MA, PhD), knowledge transfer, research parks, capacity-building



McKinsey Quarterly

A closer look at impact investing

February 2018 | Article







Incentives



Incentives, Rewards and Purpose of SSH

Purpose and practical research objectives	Important	NA/	Unimportant
Produce knowledge for the benefit of teaching, enlightenment and the public good	80 %	19 %	2 %
Produce critical analysis and societal change	65 %	24 %	11 %
Enhance conditions for inter-cultural dialogue and understanding	51%	35 %	15 %
Enhance conditions for public decision-making and public policies	36 %	40 %	24 %
Contribute to preservation of tradition and cultural heritage	33 %	36 %	32 %
Contribute to business development and commercial skills	3 %		

Humanomics Research Centre 2015 n=1071 Humanities scholars

Incentives, Rewards and Purpose of SSH

- Building an impact culture / impact literacy
- Getting SSHA on board in entrepreneurial activities incl. support, incubation, acceleration
- Strong identity in SSHA of public good character of knowledge production
- Alignment of research portfolio, reward system and institutional culture





Mobility of researchers

- Many different ways of producing tangible societal impact in SSHA
- Interactions with society: start-ups, fellowships, special grants, visits, consultancy, joint appointments, co-creation, cost-sharing, collaboration, alliances, research parks etc.
- New positions tailor-made for collaborative research: "clinical" humanities, knowledge brokers.



Bilag 2, Figur 10: Udviklingen i antal kliniske professorater

Kilde: Uddannelses- og Forskningsministeriet

Learning from other disciplines

Matrix for sector mobility





Danish Council for Research and Innovation 2018



Larivière V, Macaluso B, Mongeon P, Siler K, Sugimoto CR (2018)



PUBLICATION BOOST

Academic scientists who collaborate with large established firms publish more papers.

No industry collaboration
 Collaboration with a startup
 Collaboration with an established company



INCREASED CHATTER

Papers authored by academic researchers in 2016 were more widely publicised when they had a corporate co-author, as measured by their Altmetric Attention Score. The Altmetric score tracks the discussion around a published paper, from news articles to blog posts and tweets.





Error bars show the 95% confidence interval around each estimated point

Nature 552, S11-S13 (2017)



Knowledge exchange is domain-specific



Knowledge Exchange in the humanities in Denmark

"The survey shows that a large part of humanities scholars at Danish universities actively participate in knowledge exchange and collaboration. 82 per cent of faculty has collaborated with actors and institutions outside academia within a reference period of three years"



Budtz Pedersen et al. 2018 Humanities Impact Survey 1371 respondents











Cultural and Religious Institutions





Budtz Pedersen et al. 2019 n=1371 humanities scholars



Knowledge Exchange

Budtz Pedersen et al. 2019 Humanities Impact Survey 1371 respondents



Realizing the impact value chain



EX ANTE

EX POST



EX ANTE

RESEARCH BENEFITS

INTERACTIONS

IMPLEMENTATION

EX POST

	м						
 e.g. Impact Planning Match-making & partner search Shared definitions of research problem Clarify expectations Incentives & rewards 	e.g. • Co-production of new knowledge • Deeper partnerships • New methods • New tools • New research questions	e.g. Publications Conferences and seminars with stakeholders Social media Media & public awareness Artefacts & exhibits IP including patents	 e.g. Contextualizing results Best practices established Practical recommendations Networks and relationships Science & Policy Advise 	 Direct observable impacts Media / public awareness Socio-economic benefits New research questions Behavioural / institutional change e.g. Change in policy New practices 			
Contracts, grant applications, impact strategies, technology transfer agreements etc.	Openness, accessibility, increased knowledge base, sharing findings,	Dissemination of outputs through scholarly & non- scholarly channels	Benefits for stakeholders, enhanced Impact Readiness, contributions to practice	Changes in policy, organisation, business, practice etc. described in collaboration with non- academic partners			
Resources, inputs and planning	Research and engagement	Outputs	Outcomes	Impact ••••••humanomics			



ViVO / ReACT Impact Platform

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	meeting						
	Gruppemøde, Public Value of the Humanities d. 02.11.18, Participant 2018						
	Meeting with Assoc	ate Vice Chance	ellor at UC Da	ris (12.06.), Participant 2018 y			
	Meeting with profes	sor at UC Berkel	ey (09.06), Pa	articipant 2018			

Gruppemøde, Public Value of the Humanities d.13.04.18, Speaker 2018

presentation

Oplæg v. Brook Struck (10.09), Participant 2018 III

Conclusions

- We need healthy, connected institutions
- Fund and build infrastructures to enable Knowledge Exchange in SSH
- Microshifts (activities, interactions, relations) do not tell the full story about 'change' or 'effect' (attribution) but about »contributions«
- ReAct Indicators provide data of what researchers can do, and what KE professionals can advise them to do.



Thank you for the attention

David Budtz Pedersen: <u>davidp@hum.aau.dk</u> Twitter: @HumanomicsMap Website: <u>http://mapping-humanities.dk</u>

Contributions from Rolf Hvidtfeldt & Jonas Grønvad

Supported by

VELUX FONDEN







Engaging Universities

Jack Spaapen Senior Policy Impact Advisor, Royal Netherlands Academy of Arts and Sciences (KNAW)







BUILDING ALLIANCES WITH STAKEHOLDERS OUTSIDE ACADEMIA

necessary, inevitable, and the only way

to creative solutions for the future

AESIS Conference WDC 18 10 19 Jack Spaapen Vice chair ENRESSH COST action 15137 Partner SHAPE-ID H2020 GA 822705









Universities should be working for the greater good

- Friendly competition can push us all to do better. But when the competitiveness that fuels excellence and prestige becomes based in the logic of the market, universities lose sight of their true purpose
- KF: What might be possible if the public mission really becomes Job One for the universities?
- Provost: "Any institution that did that would immediately lose competitiveness within its cohort."

Kathleen Fitzpatrick, 11 April, Times



Widening policy demands in Europe

- NL NWO: Top sector policy, Dutch Research Agenda: 25 routes
- EU H2020; GRAND SOCIETAL CHALLENGES: health, food, energy, climate, transport, secure and inclusive societies
- Responsible Research and Innovation (RRI): public engagement, gender equality, open science, ethics, science education



Policy goals at the global level





Reply of Dutch universities to SDGs

https://www.vsnu.nl/en GB



NORTH AMERICAN EXAMPLE

Cross-border collaboration between Washington state and British Columbia, Researchers from economic, health and environmental fields, sociopoltical and policy and management aspects

Cross-border research tackles Northwest's growing wildfire impacts

Widthme are a riting schoen. Here in the Cascadia region of Washington, Creagion and Braisin Columbia, widthree are 8 serious problem, with 5,802 reported in 2018. In the U.S., 31,677 wildfires burned 3.6 million acces during the same period, according to the National Interagency Fire Castar. And in Samer, and and in the 74,155th fire since smoke, marking the 74,155th fire since January, and underscooring the fact that wildfires have become a global iesue.

To better understand the challenge and possible solutions, academic experts realized they meeded to join forces, and a collaboration was born thanks to a candid phone conversation between several educators in the region. "It really came up as we were starting to brainstorm about the problems that we all face, and that each of our institutions has researchers working on," says Gail Murphy, Vice President of Research and Innovation and a professor of computer science at the University of British Columbia, "(Wildfires) are a problem that have a real regional impact on both sides of the border, but also have global consequences."

The economic, environmental and health risks associated with wildfires are well documented, but long-term. effective management is still in its infancy. Researchers at schools including the University of British Columbia, the University of Washington and Gregon State University are working together to create an actionable plan. Fostering this kind of cross-border collaboration in research, business and other areas is a goal of the Cescadia innovation Corridor, an initiative launched in 2016, now co-chaired by Challenge Seattle and the Business Council of British Columbia.

Emergency preparedness and prevention Experts predict wildfre likelihood using weather forecast patterns, wind reports and organic fuel conditions. The process lish's walk, and academic researchers behind the wildfire project are hoping to improve methods with new technology. "We all know a lot of chings about wildfires, but the question is, could we detect the answellion is, could be detect the answellion is and computer Science & Engineering and Department of Electrical & Computer Engineering at the University of Weshington, and Co-executive Directure, Globel Innovation Exchange.

There's an above-average risk for wildfires in the Cascala region this fail, according to the latest NIC report, including parts of eastern Washington, the northern Cascades, the Columbia Basin and southweathern Coegon. Fatel ays the development of machine learning and weather sensors and remote monitoring can help officials amicid with the foresasting data could be a great opportunity to make some surpast, This is what machine learning can do - help su preficience sensor

Environmental effects

The environmental impact of forest burning lan't all bad. According to the U.S. Forest Service, neural fires support forest noosystems by renewing plants and coli. Ther seld, lenge-scale wildfires polloate the air by releasing carbon diuside — also known es greenhouse gas — into the envirosphere. Wildfires can also permanently demage the lendscape of an affected area.

Murphy highlights romenvation as a primary institutive of the group's collective efforts. "The project cuts across so many different research areas," she says. "From how we actually ensure that the forests are in shape and have the right shade of trees to mitigate worldne, to the health effects that acrus as a result of smoke in the nit, or the



Smoke from a forest fire name over North Cancedes National Park. Washington, (Getty Image

effects around agriculture and bee pollination,*

Health risks

An executiel procedure of environmental conservation is population health. A 2016 report by Harvard and Yale researchers identified more than 300 counties in the western U.S. at increased risk of pollution caused by wildfire smoke. Residents of heavily populated areas, including King County in Washington, are projected to face the highest levels of wildfire smoke exposure in the coming decades. Research revealed that the air particles produced by wildfires are email enough to be inhaled into the deepset parts of the lungs, causing respiratory and cerdiac issues like asthma and shronid idiatructive putmonary disease.

Posonous smoke produced by viribilities, can travel hundreds of miles, and Pasel asys that addressing the issue sitio means understantling how to save for those afflicted. "What kinds of imperidoes it have for people with antima?" he says, "For people with chronic obstructive pulmonary doesans? For the aderly? For children? We want the look at what are the technologies that could be brought to tear in terms of interventions and things that we could develop to cops with some of these issues."

As the effects of widdless become more known, academic researchers agree that funding and attention are necessary in maintain Cascodia's beauty and safety. and Murphy believes their afforts will gain support in the region. "By taking an meus like wildfire and showing what's possible when we all work together, we're building a scattolding that we can use to replicate for other problems people are interested in trying to address and solve," she says. "And with that, we're going to be able to bring more people into the momentum we're creating together with government and with industry, and we'll be really able to create the Cascadia of tomorrow."

The Caseadia Inscretion Corrides Conference brings together bosiness, academic, and government landers from hoth sides of the border to explore news storategies for the region to come together, maximize our shared compatibles idearinges and sheate our global accounte position. Read more at CommetCaseadia com.





21st C Academic Research: Crossroads

- Research is part of larger innovation process, both technical and social
- Growing demands for MIT research
- Researchers are operating at the cross roads of
 - > excellence in (international) competition, fields / institutions
 - > relevance for (democratic, sustainable) society, local, national



Consequences for University Policy

- Focus still on excellence: obvious
- Societal impact: for a long time high quality research and teaching was enough, not anymore
- Recognize value of SSH research, and its importance for societal problems
- STEM and ASSH have to work together: MIT research, stakeholder involvement, co-creation, curriculum change
- Become more open to society and its demands, problems: includes public engagement, open access, open innovation, building networks



Global level: Recognition SSH knowledge is indispensable

- The world is undergoing important social transformations driven by the impact of globalization, global environmental change and economic and financial crises, resulting in growing inequalities, extreme poverty, exclusion and the denial of basic human rights.
- These transformations demonstrate the urge for innovative solutions conducive to universal values of peace, human dignity, gender equality and non-violence and non-discrimination.

UNESCO. Social Transformations, < <u>https://en.unesco.org/themes/social-transformations</u> > accessed 1 February 2019.



Europe starts recognizing role of ASSH

Monitoring report 2019: Integration of Social Sciences and Humanities in Horizon 2020:

- SSH plays a key role in analysing and influencing behavioural and societal choices so that better policies can be devised in the future with a direct societal impact.
- The fostering of SSH integration [in STEMM fields, in GSC] offers almost endless opportunities.
- Report 2018: H2020 pays tribute to the findings that, although research in technologies can provide technical solutions to major challenges, Social Sciences and Humanities (SSH) can help making them accepted, understood and appropriated by the general public.

https://www.shapeid.eu/



SSH integration in Horizon Europe's Smorgasbord

- Inclusive and Secure Societies *Democracy, *Cultural heritage, *Social and economic transformations, *Disaster-resilient societies *Protection and Security, *Cybersecurity
- Health *Health throughout the life course, *Environmental and social health determinants, *Non-communicable and rare diseases, *Infectious diseases, *Tools, technologies and digital, *Health care systems, solutions for health and care
- Climate, Energy and Mobility *Climate science and solutions, *Energy supply, *Energy systems and grids, *Buildings and industrial facilities in energy, *Communities and cities transition, *Industrial competitiveness in transport, *Clean transport and mobility, *Smart mobility, *Energy storage
- Food and Natural Resources *Environmental observation, *Biodiversity and natural capital, *Agriculture, forestry and rural areas, *Sea and oceans, *Food systems, *Bio-based innovation systems, *Circular systems
- **Digital and Industry** *Manufacturing technologies, *Key digital technologies, *Advanced materials, *Artificial intelligence and robotics, *Next generation internet, *Advanced computing and Big Data, *Circular industries, *Low carbon and clean industry, *Space

Universities to reconsider their role and position



(1) Co-creation. Knowledge production is increasingly the result of collaboration with a variety of stakeholders

(2) MIT research. Collaboration between academic fields, SSH/STEMM, and beyond academia. Innovation in society is not simply the result of scientific and/or technological progress, but to a large extent the outcome of an iterative process of interaction between scientific disciplines, and with other societal domains and its stakeholders

(3) Joint agenda development in innovation ecosystems. Research and innovation are more and more taking place in a complex network in which different partners with diverse expertise and knowledge collaborate, think about the prominence of your role

(4) Collaboration instead of competition should be the main drivers in the production of knowledge \rightarrow productive interaction between stakeholders and the formulation of common goals and joint achievement of results.

Productive interactions: societal impact of academic research in the knowledge society, LERU 2018



Collaboration is difficult but doable net4society

- Different scientific language used by ASSH and STEM
 - Develop a compendium with common language used in project; review all deliverables by mixed teams
- Different research methods and scientific aporaches
 - Create cross-sectoral working groups, make sure mixed expertise is in all WPs, create an open environment for discussion, ensure conflict resolutions
- Underestimation or lack of acknowledgment by other (non-SSH disciplines)
 - Create and cultivate an environment of mutual respect, underline primary and comon objectives, allocate sufficient time and resources to deal with misunderstandings



What is to be done?

- Think collaboration not competition [the greater good]
- Involve stakeholders from early on and talk about the challenges, about what you want to achieve and what kind of contributions you can make -> polder model
- $_{\odot}$ Take stock of the current knowledge about successful ways to collaborate and practices of inter- and transdisciplinarity, identify good ITD practices \rightarrow SHAPE ID
- Decide about a method: Theory of Change, logic model, or any other



What kind of society do we want?

Primarily economic perspective

• EU/RJS/CM: STI with primary goals : Growth and Jobs: "Making research and innovation a central part of European economic policy making: growth and jobs"

Trying to attune economic, environmental and social goals

- The global new green deal van Mariana Mazzucato. A new social contract between governments and industry for fundamental green innovations (article in Social Europe)
- The Doughnut economy, Kate Raworth. Attuning socio/environmental values with economic goals

A more radical perspective

• The Catalan Robin Hood, Enric Duran Giralt. A new economic world order: more social, ethical, responsible, compare Manuel Castells, Naomi Klein

NANO RESEARCH IN CONTEXT [@ TILO PROPP]





Engaging Universities

Amanda Anderson

Andrew W. Mellon Professor of English and Humanities & Director, Cogut Institute for the Humanities







The Humanities in Practice: Impact, Collaboration, Engagement

Amanda Anderson Director, Cogut Institute for the Humanities

1. What do we mean by impact?

2. What is impact in the humanities?

The Commission joins the National Academies' National Research Council, the National Science Foundation, and the National Institutes of Health in recommending that foundations, universities, research centers, and government agencies draw in humanists and social scientists together with physical and biological scientists to address major global challenges. Humanists and social scientists are critical in providing cultural, historical, and ethical expertise and empirical analysis to efforts that address issues such as the provision of clean air and water, food, health, energy, and universal education.

> Report of the Commission on the Humanities and the Social Sciences, American Academy of Arts and Sciences, "The Heart of the Matter" (2013)



Integrative scholarship to address the world's great challenges

- Cultivating Creative Expression
- Understanding the Human Brain
- Sustaining Life on Earth
- Creating Peaceful, Just, and Prosperous Societies
- Exploring Human Experience
- Using Science and Technology to Improve Lives
- Advancing Computational and Data Sciences
- Deciphering Disease and Improving Population Health

EuropeanHorizonCommissionSocieta

- Horizon 2020 Societal Challenges
- Health, demographic change, and well-being
- Secure, clean, and efficient energy
- Food security; sustainable agriculture and forestry; marine, maritime and inland water research; and the bioeconomy
- Smart, green, and integrated transport
- Climate action, environment, resource efficiency, and raw materials
- Europe in a changing world: inclusive, innovative, and reflective societies
- Secure societies: protecting freedom and security of Europe and its citizens

Forms of Impact

Understanding and Solving Problems

Advancing Knowledge That Will Drive Change

Engaging the Public and Extra-institutional Partners

Disseminating Scholarship in Accessible Forms

HUMANITIESSCIENCESMeaningKnowledgeInterpretationExplanation

Practicing the Humanities

Clarification of Values and Norms

Learning from the Historical Record

Exploring the Cultural Archive

Ohio State University Discovery Themes

- Chronic Brain Injury
- Foods for Health
- Food and AgriCultural Transformation (InFACT)
- Global Arts + Humanities
- Infectious Diseases
- Materials and Manufacturing for Sustainability
- Sustainable and Resilient Economy
- Translational Data Analytics

Global Arts and Humanities OSU Discovery Theme

Funded Projects (Selected)

Collaboration for Humane Technologies

The Emergence of Number

Migrants and Movers: Humanities and Arts Perspectives on Global Mobility

Stanford: Catalyst for Collaborative Solutions

- How can we ensure that humanity flourishes in the cities of the future?
- How can we engineer matter from atomic to macro scales?
- How can we use autonomy to enable future technologies?
- How can we use our strength in computation and data analysis to drive innovation?
- How do we achieve effective yet affordable healthcare everywhere?
- How do we create synergy between humans and engineered system?
- How do we secure everything?
- How do we sustain the exponential increase in information technology performance?
- How do we provide humanity with the affordable energy it needs and stabilize the climate?
- How good can we get at engineering living matter?

Humanities Laboratories, John Hope Franklin Institute, Duke University

Selected Current and Recent Labs

- From Slavery to Freedom Lab
- Health Humanities Lab
- PhD Lab in Digital Knowledge
- Social Movements Lab
- BorderWork(s) Lab
- Greater than Games Lab
- Haiti Lab
- Story Lab

Arizona State University, Humanities Lab

- Educating for Inclusion
- Energy and Social Justice
- Working Bodies and Technology
- Life without Earth
- Sound and Well-Being

Brown's Graduate Certificate in Collaborative Humanities

Cross-disciplinary training
 Collaborative skills
 A credential that complements PhD degrees

 Annual roster of 6-9 seminars taught by faculty pairs
 3-year grant from the Andrew W. Mellon Foundation in support of student fellowships and programming

Collaborative Humanities 2017-2020

SOCIAL SCIENCES

Archaeology and the Ancient World Anthropology International and Public Affairs Africana Studies American Studies History Middle East Studies Political Science Urban Studies Sociology

HUMANITIES

English **Comparative Literature** Classics Computer Music and Multimedia French Studies German Studies Hispanic Studies History of Art and Architecture Italian Studies Modern Culture and Media Literary Arts Music Gender and Sexuality Studies Philosophy **Religious Studies** Portuguese and Brazilian Studies Theatre Arts and Performance Studies

Undergraduate Collaborative Humanities Courses

Undergraduate research-based, team-taught courses
 Inter-divisional, inter-school faculty pairs
 Focus on integrative themes and broad impact of university strategic plan

Annual award invites proposals that overcome methodological and structural obstacles to cross-divisional collaborations.

Undergraduate Collaborative Humanities Courses

Fall 2019 | Humanities and Social Sciences Brazilian Democracy in Literature and History

Spring 2020 | Humanities and Life Sciences Simulating Reality: The (Curious) History and Science of Immersive Experiences

Spring 2021 | Humanities and Life Sciences Happiness in Psychology and Philosophy



Engaging Universities

Panel discussion and Q&A

David Budtz Pedersen (Chair) Jack Spaapen Amanda Anderson







Engaging Universities

David Budtz Pedersen (Chair) Director, Humanomics Research Center, Denmark.

Recommendation> How to get to Brown

University leadership is necessary and requried for supporting impact/oriented SSH / investments + incentives

Universities can do fundamental basic research within targetted programmes





12.45-1.45pm Lunch

1.45-3.30pm Plenary closing

Mitsitam Cafe

Rasmuson Theater



