Who gets what, when, and how? An analysis of stakeholder interests and conflicts in and around Big Science

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Appendix

Table 1: Overview of conflict causes at the meso level in Big Science

Author(s)	Case Studies	Identified Source(s) of Conflict
Shrum et al. (2001)	Projects in particle physics, geophysics, oceanography, space science, ground-based astromony, material science & medical physics	Resources
		Communication
		Credit
		Control of project
Vasconcellos (1990)	Brazilian R&D centers	Organizational objectives and priorities
		Work and task division
Knorr-Cetina (1999)	Particle physics & molecular biology laboratory	Authorship quarrels
		Resources
		Access to scientific resources
		Work and task division
Traweek (2009)	Stanford Linear Accelerator Center (SLAC) Ko-Enerugie butsurigaku Kenkyusho (KEK)	Access to scientific instruments
		Funding
		Cultural differences
		User groups
D'Ippolito & Rüling (2019)	Institut Laue-Langevin (ILL)	Work and task division
Mahfoud (2021)	Human Brain Project (HBP)	Project objective
		Epistemology
		Funds
		Organization of scientific work
Hilgartner (2011)	Human Genome Project (HGP)	Resource allocation
		Distribution of scientific rewards
		Ethics
		Project objective
		Epistemology
		Access to scientific resources
		Project management
Lambright (2002)	Human Genome Project (HGP)	Resources
		Science policy
Cook-Deegan (1994)	Human Genome Project (HGP)	Resources
		Project management
		Science policy
Claessens (2020)	International Thermonuclear Experimental Reactor (ITER)	Technology
McCray (2000)	Gemini Telescope	Funding
		Access to scientific instruments
Riordan et al. (2015)	Superconducting Super Collider (SSC)	Resources

Table 2: Overview of conflict causes at the macro level in Big Science

Author(s)	Case Studies	Identified Source(s) of Conflict
Hallonsten (2014)	European Organization for Nuclear Research (CERN) II European Southern Observatory (ESO) Institut Laue-Langevin (ILL) European Synchrotron Radiation Facility (ESRF) European X-ray Free Electron Laser (XFEL) European Spallation Source (ESS)	Siting Financial contributions Scientific access Procurement
Krige (2003)	European Organization for Nuclear Research (CERN) II	Siting
McCray (2010)	International Thermonuclear Experimental Reactor (ITER)	Siting
Claessens (2020)	International Thermonuclear Experimental Reactor (ITER)	Funding Siting Schedule
Aberg (2021)	International Thermonuclear Experimental Reactor (ITER)	Siting Organization Funding
Williams & Mauduit (2020)	Astronomy	Scientific access
Arnoux & Jacquinot (2006)	International Thermonuclear Experimental Reactor (ITER)	Funding

Table 3: Overview of analyzed documents for chapter four

Author Name	Year	Title	Document Type
European Commission	2011	Digital Agenda: Commission Selects Six Future and Emerging Technologies Projects to Compete for Research Funding	Press release
Waldrop	2012	Brain in a Box	Magazine article
Hummel	2015	Dicke Schädel, falsche Versprechen	Newspaper article
Horgan	2013	Do Big New Brain Projects Make Sense When We Don't Even Know the "Neural Code"?	Opinion piece
Sample	2014	Scientists Threathen to Boycott 1.2bn euro Human Brian Project	Newspaper article
Schnabel & Rauner	2013	Ein Hauch Apollo	Newspaper article
Destexhe	2021	In Silico, Computer Simulations from Neurons up to the Whole Brain	Academic article
Neurofuture.de	2014	Open Message to the Europan Commission Concerning the Human Brain Project	Press release
Marquardt	2015	Human Brain Project Mediation Report	Report
Kelly	2014	Brainstorm: Neuroscientists Protest against Europe's Human Brain Project	Magazine article
Broad	1992	Quest for Fusion Power Is Going International	Newspaper article
Claessens	2020	ITER: The Giant Fusion Reactor	Book
McCray	2010	Globalization with Hardware. ITER's Fusion of Technology, Policy, and Politics	Academic article
Reagan & Gorbashev	1985	Joint Soviet-United States Statement on the Summit Meeting in Geneva	Government document
European Commission	2017	EU Contribution to a Reformed ITER Project	Government document
Madelin	2014	No Single Roadmap for Understanding the Human Brain	Government document
US Department of Energy	2004	Remarks by Secretary of Energy Spencer Abraham	Government document
Buck	2004	Paris Urges EU to Build Fusion Centre Alone	Magazine article
Brumfiel & Butler	2003	US Support for Spain Triggers Unease over Fusion Project	Magazine article
Arnoux & Jacquinot	2006	ITER: Le Chemin des Étoiles?	Book
Watts	2003	End of an Era as Japan Enters Iraq	Newspaper article
Lambright	2002	Managing Big Science: A Case Study of the Human Genome Project	Academic article
Mahfoud	2021	Visions of Unification and Integration: Building Brains and Communities in the Human Brian Project	Academic article

Aberg	2021	The Ways and Means of ITER	Academic article
Cook-Deegan	1994	Origins of the Human Genome Project	Academic article
D'Ippolito & Rüling	2019	Research Collaboration in Large Scale Research Infrastructures	Academic article
Hallonsten	2014	The Politics of European Collaboration in Big Science	Book chapter
Hilgartner	2011	The Human Genome Project	Book chapter
Knorr Cetina	1999	Epistemic Cultures	Book
Krige	2013	The Politics of European Scientific Collaboration	Book chapter
McCray	2000	Large Telescopes and the Moral Economy of Recent Astronomy	Academic article
Shrum et al.	2001	Trust, Conflict and Performance in Scientific Collaboration	Academic article
Traweek	2009	Beamtimes and Lifetimes	Book
Vasconcellos	1990	Managing Conflicts between Line and Staff in Interdisciplinary R&D Projects	Book chapter
Williams & Mauduit	2020	The Access and Return on Investment Dilemma in Big Science Research Infrastructures	Book chapter