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Introduction:
Social Movements, Protest, and Academic
Knowledge Formation.
Interactions since the 1960s

ABSTRACT

This introductory paper seeks to stimulate discussion on entanglements between protest campaigns, social movements and academic processes of generating knowledge in the USA and Western Europe since the 1960s. It examines how protagonists from social movements and counterculture have contributed to understandings of academic knowledge formation and its relationship to the public sphere, the role of the scientist, and the practical processes involved in generating and acquiring knowledge. Focusing on drafts of both 'alternative' and 'conventional' science and their impact on each other, the paper in particular suggests enquiring into the creative and experimental aspects of alternative scientific projects and the media in which they took form. In pursuit of this goal, it proposes to transcend the existing compartmentalisation of research in social movements and the formation of knowledge into numerous specialities, and to further broaden the dialogue between the history of social movements and the history of science and of knowledge.

Keywords: history of science; history of universities; history of higher education; history of knowledge; student activism; critique of science; university reform

Introduction: Politicisation and Perceptions of Crisis

Certain currently fashionable trends in the critique of science and the assessment of its consequences, as well as attempts to subject science to political censorship or even to political control, are symptomatic of science's profound crisis of legitimacy, and in the opinion of some observers even portend a fundamental reassessment of science's place in society.¹

The sociologist of science Peter Weingart wrote those words in the early 1980s. They reflect a pronounced politicisation of science, which the sociologist detected, for example, in the public debate on research into recombinant DNA, or in the critique of theories asserting that human intelligence was a hereditary trait.² The perception, however, that science in Europe and North America was in dire straits may also have been suggested by the critical examination of academic knowledge formation and institutions of higher education articulated through student protests and vigorous social movements.

Interactions between social movements and academia can be traced back to a long pedigree.³ Yet, since the 1960s, both critique of science and suggestions for improvement of research and teaching have proliferated not least as a result of being stimulated by social movements. These evaluations, which refer to perceived deficiencies both in research and education, include public protest campaigns as well as efforts to bring about change “from within”.⁴ From the history of counterculture and the New Left of the 1960s to the social movements and the alternative scene of the 1970s and 1980s, students and academic faculty denounced what they called ‘aberrations of science and higher education’. This gave rise to an image of academic knowledge formation as capitalistic, undemocratic, subservient to the market, a hindrance to thinking, and, in any case, in dire need of reform. While caustically mocking the procedures of what they saw as ‘established’ science,

- 1 Peter Weingart: *Verwissenschaftlichung der Gesellschaft—Politisierung der Wissenschaft*, in: *Zeitschrift für Soziologie* 12:3 (1983), pp. 225–241, p. 225 (translated by the author).
- 2 *Ibid.*
- 3 Examples for this long tradition are discussed by Mark Edelman Boren: *Student Resistance: A History of the Unruly Subject*, New York/London 2001; Hanna Engelmeier/Philipp Felsch: “Gegen die Uni studieren”: Ein Vorwort, in: *Mittelweg* 36 26:4/5 (2017), pp. 4–13.
- 4 Terminologically, I am following Mikaila Mariel Lemonik Arthur: *Student Activism and Curricular Change in Higher Education*, Farnham 2011, pp. 4–5. Labeling a wide range of contentious politics at colleges and universities “social movements” irrespective of if these were driven by academic “insiders” or “outsiders”, Arthur’s approach is able to bridge social movements, contentious politics, and “contentious organizational politics”.

activists sought to change the methods and subject matter of research and teaching as part of broader social and political struggles. As scholar of technology and society Andrew Jamison sums up:

Out of the anti-imperialist and student movements of the 1960s and the environmentalist, feminist, and identity movements of the 1970s and 1980s have emerged a range of alternative ideas about science, in form, content, and meaning, that have given rise to new scientific theories, academic fields, and technological programs.⁵

Drawing on examples from the USA and Western Europe, this special issue evaluates and critically reflects such interactions between social movements, protest, and academic knowledge formation since the 1960s. In addition to analysing specific practices and projects in which knowledge, movements and protests came to interact, it provides an opportunity for examining the conceptions of science and of higher education that underlay each of them. Thus, this special issue is concerned with continuing and expanding the dialogue on the links that join social movements, science and knowledge; it pleads for discussing more intensively what collective action might entail for academic knowledge formation, and for modes of learning and teaching.

This introductory paper first sketches the historiography on social movements and modes of academic formation. While the various strands of research still remain largely separated from each other, I argue that there are also indications of an intensifying dialogue between the fields involved (“Academic Knowledge Formation, Protest, and Social Movements in Historiography: Distance and Dialogue”). The paper then outlines central themes and objects in which social movements were involved in issues of research and knowledge production (“Themes—Objects—Effects”). The ‘alternative drafts’ that emerged as a result of such encounters, the next section points out, shared rejection of the *status quo* and a claim to being counter-models, while their course and outcome remained undetermined (“Research Perspectives”). Focusing on three examples, the final section takes a closer look at alternative drafts and discusses their relevance for assessments and images of science and the humanities in general. It argues that in order to fully comprehend interactions between social movements and academic knowledge formation, we would be well advised to transcend contemporary dichotomies between ‘alternative drafts’ and ‘conventional science’ and instead analyse carefully to what extent understandings of ‘conventional’ modes of knowledge formation result from ‘alternative drafts’, rather than being their presupposition (“‘Alternative Drafts’ and ‘Conventional

5 Andrew Jamison: Science and Social Movements, in: Neil J. Smelser/Paul B. Baltes (eds.): International Encyclopedia of the Social and Behavioral Sciences, Amsterdam 2001, pp. 13625–13629, p. 13627.

Science’: Images of Academic Knowledge Formation beyond Dichotomies”). Thereby, this paper particularly recommends enquiring into the creative and experimental aspect of alternative scientific projects and the media in which they took form.

The special issue consists of four articles. The initial paper by Theresa Nisters discusses fictional academies as a means of institutional critique. The creation of alternative universities such as the ‘free university’ or the ‘women’s universities’ has been a key feature in political approaches to reform academic research and teaching since the 1960s. Drawing on the example of the *LIDL-Akademie* (Jörg Immendorff, Karlsruhe) and the *Académie Worosis Kiga* (Gérard Gasiorowski, Paris), Theresa Nisters’ paper considers this topic from the hitherto underexplored perspective of art history. The following two papers move to attempts of advancing academic learning and teaching that were inspired by participatory motivations and ideas of public responsibility. Wilfried Rudloff historicises initiatives to establish ‘project studies’ in West Germany. Since the early 1960s, recommendations of group learning and project studies have been motivated by the expectation that they will make learning more ‘relevant’ and ‘practical’, link research and teaching, and contribute to the democratisation of universities. As Anna Wellner shows in the next case study on student volunteerism in the USA, students and staff also ventured to leave the confines of the university. In particular, her paper examines ‘service learning’ as an academic practice that aimed to connect research and teaching to perceived societal needs. Societal and political movements also left their mark on modes of academic publishing. The last chapter by Martin Löhnig exemplifies this through the lens of jurisprudential publicism.

The issue concludes with an additional article by Holger Weiss titled “Against Japanese and Italian Imperialism: The Anti-War Campaigns of Communist International Trade Union Organizations, 1931–1936” and book reviews by Benedikt Sepp and Michaela Keim.

Academic Knowledge Formation, Protest, and Social Movements in Historiography: Distance and Dialogue

Social movements and modes of academic formation of knowledge have frequently been a subject of historiography; however, treatment of these matters is spread over many fields, each of which pursues different interests and asks different questions. The *historiography of universities and institutions of higher education* routinely deals with interactions between social movements and higher learning. Scholars who are interested in the history of universities and institutes of higher education often focus on how student protests and campaigns for political demands have arisen, and which institutional changes they have managed to achieve. Nevertheless, the focus on specific institutions of research and higher learning can hamper discussion of overarching issues concerning the formation of knowledge. This is because it tends to focus on single cases, often in the context of

anniversaries.⁶ A crucial issue for the *history of science* are the procedures and epistemic standards for producing knowledge. The history of science has often been somewhat aloof from that of social movements. On surveying the three most recent volumes of *British Journal for the History of Science*, *Isis. A Journal of the History of Science Society* and *Osiris*, few essays directly deal with protest campaigns and social movements and their implications for science.⁷ Lastly, interest in the development of social movements is inherent to the *history and sociology of social movements*. While the student protests and movements of ‘1968’ have received widespread attention in these fields, frequently involving issues concerning science and knowledge,⁸ the decades of the 1970s and 1980s have been less researched by historians, and “the relations between science and social movements have tended to be a neglected subject in the social sciences”.⁹ Consequently, the sociologists and scholars of social movements Aziz Choudry and Dip Kapoor stated in 2010 that the “dynamics, politics, and richness of knowledge production within social movements and activist contexts are often overlooked in scholarly literature, and sometimes even in the movements themselves”.¹⁰ This had the lamentable effect that “the intellectual work that takes place in movements frequently goes unseen, as do the politics, processes, sites, and locations of knowledge production and learning in activist settings.”¹¹

Depending on each field’s specific interests and the topics stressed by each speciality, strengths are unevenly distributed, as are blind spots. However, there are indications that aspects of knowledge formation in social movement contexts are increasingly drawing interest and that consequently approaches of the generalising sort are becoming more

- 6 With critical discussions about the state of university history and suggestions for improvement: Stefan Gerber: *Wie schreibt man “zeitgemäße” Universitätsgeschichte*, in: *NTM* 22:4 (2014), pp. 277–286; Sylvia Paletschek: *Stand und Perspektiven der neueren Universitätsgeschichte*, in: *NTM* 19:2 (2011), pp. 169–189; Christa-Irene Klein et al.: *Universität, Wissenschaft und Öffentlichkeit in Westdeutschland 1945 bis ca. 1970: Einleitung*, in: Sebastian Brandt et al. (eds.): *Universität, Wissenschaft und Öffentlichkeit in Westdeutschland (1945 bis ca. 1970)*, Stuttgart 2014, pp. 7–38.
- 7 *BJHS* Vol. 2015–2/2018; *Isis* Vol. 2015–2/2018; *Osiris* Vol. 2015–2017.
- 8 See Andrew Jamison: *Science and Social Movements*; as exemplary studies, see for instance Kelly Moore: *Disrupting Science: Social Movements, American Scientists, and the Politics of the Military, 1945–1975*, Princeton, N.J. 2009; Kelly Moore: *Political Protest and Institutional Change: The Anti-Vietnam War Movement and American Science*, in: Marco Giugni/Doug McAdam/Charles Tilly (eds.): *How Social Movements Matter: Social Movements, Protest, and Contention*, Vol. 10, Minneapolis/London 1999, pp. 97–115; Ron Eyerman/Andrew Jamison: *Social Movements: A Cognitive Approach*, Pennsylvania 1991.
- 9 Andrew Jamison: *Science and Social Movements*, p. 13625.
- 10 Aziz Choudry/Dip Kapoor: *Learning from the Ground Up: Global Perspectives on Social Movements and Knowledge Production*, in: Aziz Choudry/Dip Kapoor (eds.): *Learning from the Ground Up: Global Perspectives on Social Movements and Knowledge Production*, Houndsmill 2010, pp. 1–13, p. 1.
- 11 *Ibid.*

feasible than before. One sign that points to such a trend is an increased interest in research on the history of science through a Cold War focus, involving the study of linkages among political, social, economic and scientific developments. Against this backdrop, a recent anthology edited by historians David Kaiser and Patrick McCray studies the emergence of what they call “groovy science” since the 1960s.¹² Secondly, influences emanating from the history of knowledge likewise encourage thinking about social movements and their relevance for science and knowledge in general. One factor that eases convergence between social movement research and the history of knowledge is that the latter defines knowledge very broadly. It thus encompasses institutionalised science, without restricting the interest to institutionalised science alone, and emphasises the circulation of knowledge across spatial and cultural boundaries.¹³ This trait stimulates research into entanglements between social movements and their message on the one hand and modes of production of knowledge, both within and outside institutionalised science, on the other. Thirdly and lastly, in a parallel development, sociological and political-science research on social movements seems about to devote more attention to aspects of the formation of knowledge. Consequently, political sociologists Donatella della Porta and Elena Pavan in a recent essay have highlighted “knowledge practices as a meaningful part of contemporary progressive activism”.¹⁴

- 12 David Kaiser/Patrick McCray: Introduction, in: David Kaiser/W. Patrick McCray (eds.): *Groovy Science: Knowledge, Innovation, and American Counterculture*, Chicago/London 2016, pp. 1–10. See also Olival Freire Junior: *The Quantum Dissidents: Rebuilding the Foundations of Quantum Mechanics (1950–1990)*, Berlin 2016, pp. 197–233 (chapter “From the Streets into Academia. Political Activism and the Reconfiguration of Physics around 1970”); David Kaiser: *How the Hippies Saved Physics: Science, Counterculture, and the Quantum Revival*, New York 2012. Focusing on the next decade, Michael Egan: *Survival Science: Crisis Disciplines and the Shock of the Environment in the 1970s*, in: *Centaurus* 59:1/2 (2017), pp. 26–39, discusses the emergence of “crisis disciplines” and “survival science” as “new forms of scientific inquiry—driven by environmental crisis and social need”. An increased interest in aspects of politics and power in the history of science is even admitted in the critical account by Volker Roelcke: *Auf der Suche nach der Politik in der Wissensproduktion: Plädoyer für eine historisch-politische Epistemologie*, in: *Wissenschaftsgeschichte* 33:2 (2010), pp. 176–192, pp. 176–182.
- 13 See, for instance, Johan Östling et al.: *The History of Knowledge and the Circulation of Knowledge*, in: idem (eds.): *Circulation of Knowledge: Explorations in the History of Knowledge*, Lund 2018, pp. 9–33; Nils Gütler/Margarete Pratschke/Max Stadler: Editorial: *Wissen*, ca. 1980, in: *Nach Feierabend* 11 (2016), pp. 7–14; Philipp Sarasin: *Was ist Wissensgeschichte?*, in: *Internationales Archiv für Sozialgeschichte der deutschen Literatur* 36 (2011), pp. 159–172, p. 166.
- 14 Donatella della Porta/Elena Pavan: *Repertoires of Knowledge Practices: Social Movements in Times of Crisis*, in: *Qualitative Research in Organizations and Management: An International Journal* 12:4 (2017), pp. 297–314; on the recent situation, see also Norah MacKendrick: *Out of the Labs and into the Streets: Scientists get Political*, in: *Sociological Forum* 32:4 (2017), pp. 896–902.

Following these suggestions, this special issue aims to strengthen the connection between the history of social movements, the history of science and of knowledge, and the history of universities and higher education. In pursuit of this goal, it proposes to transcend the existing compartmentalisation of research in social movements and the formation of knowledge into numerous specialities, and further broaden the dialogue between the various strands of research. Accordingly, the issue's contributors come from different academic disciplines, including the history of social movements and the history of education, art history as well as law.

Themes—Objects—Effects

Whoever surveys the history of social movements in the 1960s-1980s period will be astonished at how deeply involved many of them were with various aspects of science and academic knowledge formation. Protest rallies at institutes of higher education were an integral part of the 1968 student movements. Of the 4,656 protest events that took place between 1968 and 1975 that were reported on by *The New York Times*, 24 per cent were directed at educational institutions¹⁵—compared to 18 per cent in the years between 1960 and 1990.¹⁶ This does not signify a general waning of activism, but instead points to a gradual transition from the protest events of the 1960s to steadier and more constant efforts to address knowledge issues in the 1970s and 1980s. As will be shown below, propositions for change focused on research specialities and methods. They were targeted at methods of teaching and learning. They encouraged novel infrastructures at universities and other institutions of higher learning, as well as the institutionalisation of new publication formats. In accordance with this, concrete propositions for the advancement of academic knowledge formation fostered a more general discourse on the forms, goals and characteristics of science and the humanities and their relation to the public.

- 15 Mikaila Mariel Lemonik Arthur: Student Activism and Curricular Change in Higher Education, p. 5, quoting Nella van Dyke/Sarah A. Soule/Verta A. Taylor: The Targets of Social Movements: Beyond a Focus on the State, in: *Research in Social Movements, Conflicts, and Change* 25 (2004), pp. 27–51.
- 16 Mikaila Mariel Lemonik Arthur: Student Activism and Curricular Change in Higher Education, p. 5, quoting Edward T. Walker/Andrew W. Martin/John D. McCarthy: Confronting the State, the Corporation, and the Academy. The Influence of Institutional Targets on Social Movement Repertoires, in: *American Journal of Sociology* 114 (2008), pp. 35–76. Caroline M. Hoeffler: British Student Activism in the Long Sixties, New York/London 2013, pp. 200–202, rather sees an “overall decline of activism” until a new wave of a student protest in 2010/11.

Students and politically committed researchers contested the priorities assigned to certain *topics and research focuses* in various disciplines. They found fault with military research and challenged specific research specialities, such as nuclear science, certain strands of genetics, the emerging field of socio-biology and recombinant DNA research. Public criticism was also directed at research on human intelligence that suggested interracial differences in intelligence and asserted that IQ was a hereditary trait.¹⁷ Vice versa, activists for instance from the civil rights movement, the environmental movement, or the women's rights movement sought to devote more resources to topics in research and education that they deemed important but underrepresented. This led to changes in the priorities of certain specialities, for example when environmental 'sustainability' and renewable energy sources were gradually adopted as legitimate spheres of research in science and technology. Furthermore, social movement activism encouraged the establishment of new academic fields, such as African-American studies, women's studies, and gay and lesbian studies.¹⁸

Other items on the reform agenda were *research methods and procedures*. Activists and politically inspired scientists for instance cherished small-scale projects, valued "appropriate science" as opposed to "big science", or organised campaigns against covert research.¹⁹ Participants in social movements recommended strengthening participatory approaches and research procedures.²⁰ This normative emphasis on involving broad segments of the population was also reflected in thinking on planning and design, and in applied fields like architecture, design, and urban planning.²¹ Often the justification

- 17 These are just some of the issues discussed in Rita Arditti/Pat Brennan/Steve Cavrak (eds.): *Science and Liberation*, Boston 1980.
- 18 Andrew Jamison: *Science and Social Movements*; Fabio Rojas: *Activism and the Academy: Lessons from the Rise of Ethnic Studies*, in: Neil Gross/Solon Simmons (eds.): *Professors and their Politics*, Baltimore 2014, pp. 243–266; Stefanie Ehmsen: *How the Women's Movement Changed Academia: A Comparison of Germany and the United States*, in: Kristina Schulz (ed.): *The Women's Liberation Movement: Impacts and Outcomes*, New York/Oxford 2017, pp. 36–50; Mikaila Mariel Lemonik Arthur: *Who are the Insiders? Faculty and Students as Activist*. Position paper, for "Making Connections: Movements and Research in a Global Context", Thematic Session on Campus Activism, University of Nevada Las Vegas, August 19, 2011; David Hess/Steve Breyman/Nancy Campbell/Brian Martin: *Science, Technology, and Social Movements*, in: Edward J. Hackett et al. (eds.): *The Handbook of Science and Technology Studies*, 3. ed., Cambridge/Mass. 2008, pp. 473–498.
- 19 David Kaiser/Patrick McCray: Introduction, p. 2; Kelly Moore: *Disrupting Science*, p. 170 (referring to campaigns against the Jason Program); Jon Agar: *What Happened in the Sixties?* in: *British Society for the History of Science* 41:4 (2008), pp. 567–600, p. 582.
- 20 Mathieu Quet: *Science to the People! (and Experimental Politics): Searching for the Roots of Participatory Discourse in Science and Technology in the 1970s in France*, in: *Public Understanding of Science* 23:6 (2014), pp. 628–645.
- 21 Jesko Fezer: *Planungsmethodik gestern*, in: *disco* 6 (2007), pp. 5–69; Claudia Mareis: *Design als Wissenskultur: Interferenzen zwischen Design- und Wissensdiskursen seit 1960*, Bielefeld

offered for such developments was the assertion that knowledge had now become an arena for political action, resulting in “epistemic inequalities” becoming legitimate targets of criticism.²² Commenting on the “radical science” movement in France, whose approach to science was summed up in its slogan “Science for the people and by the people” Mathieu Quet wrote:

Papers suggest that for those who are ‘excluded from knowledge’ it will be necessary to ‘take the power—and maybe to destroy it—in order to found and to master the new knowledge’²³ Others ask for a ‘collective appropriation of scientific knowledge’²⁴ and for methodical destruction of the ‘sacred wall which separates those who *know* and those who *do not know*.’²⁵

Moreover, social movements addressed the *subjects and modes of learning and teaching*. Initial signs of dissatisfaction were evident in biting criticism by students of the prerequisites posed by their syllabi and programmes of study.²⁶ Inspired not least by the civil rights agitation in the American South, U.S. students in the early 1960s for instance articulated disenchantment with what they saw as an

abstract curriculum that ignored the contemporary social issues, its devotion to the ideal of objectivity and distrust of commitment and engagement, its authoritarian style of instruction that encouraged passivity rather than participation, and its campus rules that unnecessarily restricted students’ freedom.²⁷

2011, pp. 34–54; Susanne Schregel: Gestaltung und ihre soziale Organisation: Schlaglichter auf die Geschichte der Partizipation in den USA und Westeuropa, in: Claudia Mareis/Matthias Held/Gesche Joost (eds.): *Wer gestaltet die Gestaltung? Praxis, Theorie und Geschichte des partizipatorischen Designs*, Bielefeld 2013, pp. 23–42.

22 Mathieu Quet: *Science to the People! (and Experimental Politics)*, p. 634.

23 *Impascience* 6, p. 21, quoted following Mathieu Quet: *Science to the People! (and Experimental Politics)*, p. 634.

24 *Impascience* 7, p. 50, quoted following Mathieu Quet: *Science to the People! (and Experimental Politics)*, p. 634.

25 *Impascience* 1, p. 3, quoted following Mathieu Quet: *Science to the People! (and Experimental Politics)*, p. 634.

26 As a famous example, see Bradford Cleaveland: *A Letter to Undergraduates* [Slate Supplement Record, Vol. 1, No. 4, Berkeley, Sept. 1964], in: Seymour Martin Lipset/Sheldon S. Wolin (eds.): *The Berkeley Student Revolt: Facts and Interpretations*, New York 1965, pp. 66–81, pp. 67–69; for context William J. Rorabaugh: *Berkeley at War: The 1960s*, New York/Oxford 1989, pp. 45–46.

27 Julie A. Reuben: *Reforming the University: Student Protests and the Demand for a “Relevant” Curriculum*, in: Gerard J. Degroot (ed.): *Student Protest: The Sixties and After*, Hoboken 2014, pp. 153–168, p. 153.

Proponents of black studies in the U.S. strived to “develop alternative forms of scholarship that would breach the gap between knowledge and action, and serve as levers for general academic reform”. Hoping to establish a “non-sexist, egalitarian education”, protagonists from women’s studies tried to reconsider classroom dynamics and to find strategies to strengthen students’ self-direction in learning and teaching.²⁸

In the wake of these initiatives and others, it became fashionable to question prevailing forms and practices in learning and teaching. For example, students would question whether lectures were suitable channels for imparting knowledge. They explored the possibility of introducing “critique of didactic methods” (*Unterrichtskritik*) by collecting “lecture reviews” (*Vorlesungsrezensionen*), and would independently organise counter-lectures and teach-ins. They would exchange ideas about collaborative learning methods such as group discussions and argue for the establishment of students’ study collectives or working on projects, eliciting remarks about an “obsession with groups” (*Gruppeneuphorie*).²⁹

This experimentation with different didactic approaches was an avowed attempt to find less hierarchical formats for teaching and learning.³⁰ For example, students and teachers recommended teaming up for collective study in order to create “study partnerships” that supposedly constituted a step toward “genuine dialogue”.³¹ Resorting to experience was one of the factors involved. Influenced by therapeutic techniques and impulses from humanistic psychology, scholars of university didactics for instance pondered improvement of learning processes by stimulating students’ emotional involvement.³² Finally, practical approaches such as service learning were intended to achieve a more responsible sort of knowledge transfer and acquisition that revolved around service of

28 Ibid., p. 159, p. 161.

29 Quotes from Ludwig Huber: Hochschuldidaktik: Ein Überblick, in: Hartmut van Hentig/Ludwig Huber/Peter Müller (eds.): Wissenschaftsdidaktik: Referate und Berichte von einer Tagung des Zentrums für Interdisziplinäre Forschung der Universität Bielefeld am 11. und 12. April 1969, Göttingen 1970, pp. 41–82, 56–57 (translated by the author). See also the contribution by Wilfried Rudloff in this issue; Anna Wellner: Project-Based Learning from the Late 1960s to the Early 1980s: A Case Study from Lansing and Bremen, in: Knud Andresen/Stefan Müller (eds.): Contesting Deregulation: Debates, Practices and Developments in the West since the 1970s, New York 2017, pp. 152–165.

30 For a discussion of the particularly vivid connection between anti-/authoritarianism, reflections about national socialism, and students’ initiatives for democratization at West German universities, see Carola Groppe: “Die Universität gehört uns”: Veränderte Lehr-, Lern- und Handlungsformen an der Universität in der 68er Bewegung, in: Meike Sophia Baader (ed.): “Seid realistisch, verlangt das Unmögliche”: Wie 1968 die Pädagogik bewegte, Weinheim/Basel 2008, pp. 121–140.

31 Peter Hrabowski: Introduction, in: Brigitte Eckstein/Peter Hrabowski (eds.): Gruppendynamische Arbeit an der Hochschule: Ein Report, Heidelberg 1973, pp. 8–9.

32 Klaus W. Vopel/Rainer E. Kirsten: Kommunikation und Kooperation: Ein gruppendynamisches Trainingsprogramm, München 1974, pp. 9–11.

community.³³ Focusing on such methods and procedures of cognition and knowledge formation helps us avoid cognitive tunnel vision, without however ignoring the truly intellectual inputs that social movements are capable of supplying.³⁴

Social and political movements left their mark on modes of *academic publishing and approaches to disseminating knowledge*,³⁵ and new publication formats emerged in many disciplines. The journals supported by the radical science movement such as *Science for the People* (USA), *Undercurrents* (Great Britain), *Pandore* (France) or *Wechselwirkung* (Correlation, West Germany) published extensively on modes, aims and subject matters of academic knowledge production.³⁶ Whereas the scientific journal is a traditional topic in the history of science, much remains to be learned about scientific journals that were initiated not least through interactions with social movements. The purposes of such publications should be differentiated. Apart from devoting more attention to certain topics, establishing alternative publication formats and reflecting about the understanding of science, an additional goal could be improving communication among scientists in different fields or tightening links among science, society and politics. For example, the first issue of the journal *Wissenschaft und Frieden* (Science and Peace) appeared in the autumn of 1983 during the climax of protest against deployment of new nuclear weapons in West Germany and in the heyday of the peace movement. According to the editors, the new journal was intended to “support the efforts of many scientists to attain peace”.³⁷ The editors set forth their motives under the heading: “There is no longer any demand for ivory tower science”.³⁸ The first issue included reports on the politics and the science of peace, as well as a detailed list of anti-war campaigns being waged at universities.³⁹

33 See the contribution by Anna Wellner in this issue.

34 One inspiration here is offered by Ron Eyerman/Andrew Jamison: *Social Movements*, pp. 45–65, who have described interactions between social movements and knowledge formation as variations of cognitive praxis. They picture knowledge creation “as a collective process” which is “the product of a series of social encounters, within movements, between movements, and, even more importantly perhaps, between movements and their established opponents” (quote p. 57). On the relation of practice and knowledge, see also Donatella della Porta/Elena Pavan: *Repertoires of Knowledge Practices*.

35 See the contribution by Martin Löhnig in this issue.

36 Mathieu Quet: *Science to the People! (and Experimental Politics); Before Critique Ran out of Steam: Die Zeitschrift “Wechselwirkung—Technik—Naturwissenschaft”*, 1979–1989: Ein Interview mit Reinhard Behnisch, Barbara Orland und Elvira Scheich, in: *Nach Feierabend* 11 (2016), pp. 15–33, pp. 20–21; Olival Freire Junior: *The Quantum Dissidents*, p. 223.

37 *Wissenschaft und Frieden* 1:1 (1983) (translated by the author).

38 *Ibid.* (translated by the author).

39 *Ibid.* On the figure of the ivory tower, see Steven Shapin: *The Ivory Tower: The History of a Figure of Speech and its Cultural Uses*, in: *BJHS* 45:1 (2012), pp. 1–27.

Campaigns like these illustrate how social movements stimulated general debates on *forms, goals and characteristics of academic knowledge formation in general*, and, in particular, interest in issues of ‘responsibility’ and involvement. Starting in the 1960s, radical caucuses had emerged to defy scholarly detachment. Activists attempted to link universities more closely with society and embed political activities in academic reward structures.⁴⁰ Related to this were reflections on the scope of knowledge production as a means of structuring the relations between science and society. Students and staff launched practical proposals and projects that sought to strengthen links between institutions generating knowledge and society at large. The group *Science for the People* for instance initiated “projects such as providing assistance for agriculture, creating teaching modules for secondary-school teachers, carrying out health studies for unions, supporting Vietnamese scientists, and countering the claims of sociobiologists”.⁴¹ Another example of attempts to foster interactions between scientists and other citizens is the development of so-called ‘science shops’.

Science shops first emerged in the Netherlands (as ‘*wetenschapswinkels*’) in the 1970s and were subsequently adopted in many other countries.⁴² In the mid-1980s, a Dutch science shop activist at the Delft University of Technology described science shops as “intermediaries between ‘underprivileged’ groups in Dutch society and research institutes (universities)”.⁴³ Science shops started out as “coalitions of the student movement and left-wing scientists”. Most of them had the dual purpose of “making the knowledge produced at the university more accessible to the underprivileged” and “attuning research and education at universities to social problems and needs”.⁴⁴ The stock in trade of science shops was sought by various groups, such as unions, patient groups, third-world activists and women’s liberation groups that dealt with issues like occupational health, social security and working conditions.⁴⁵ According to the statement of the activist in Delft, the

40 Andrew Jewett: *The Politics of Knowledge Production in 1960s America*, in: *Social Science History* 36:4 (2012), pp. 570–572; Julie A. Reuben: *Challenging Neutrality. Sixties Activism and Debates over Political Advocacy in the American University*, in: Neil Gross/Solon Simmons (eds.): *Professors and their Politics*, Baltimore 2014, pp. 217–239.

41 See Kelly Moore: *Disrupting Science*, pp. 158–189 (Chapter 6: “Science for the People”—Enactments of the New Left Politics of Science).

42 Joseph Wachelder: *Democratizing Science: Various Routes and Visions of Dutch Science Shops*, in: *Science, Technology, and Human Values* 28:2 (2003), pp. 244–273, pp. 244–245, pp. 252–257; Alan Irwin: *Citizen Science: A Study of People, Expertise and Sustainable Development*, London 1995, pp. 155–166; Guido Block-Künzler/Dittmar Graf: *Wissenschaft von unten: Zwischenbilanz und Perspektiven der Wissenschaftsladen-Bewegung*, Frankfurt/Main 1993, pp. 7–11.

43 Annemarie van de Vusse: *Letters to the Editors: Visitors to the “Science Shops”: Their Images of Science*, in: *Science, Technology, and Human Values* 10:4 (1985), pp. 75–76.

44 *Ibid.*

45 See Joseph Wachelder: *Democratizing Science*, pp. 244–245, pp. 252–257.

requesting groups wanted to use science firstly to buttress the legitimacy of their concerns through reliance on scientific underpinnings. In the second place, they sought help for understanding published reports—for example, for inferring the implications for citizens' lives of soil contamination data.⁴⁶

However, the importance attributed to the university's societal orientation varied greatly from place to place, as did the degree of autonomy desired for institutions of higher learning. Andrew Jewett emphasises that although radical student protests have invariably addressed issues of university autonomy ever since the time of the free speech movement, it would nonetheless be too simplistic to posit a dichotomy between liberal advocates of political autonomy of universities on the one hand and radical champions of politicisation on the other. On the contrary, some radicals wished instead to render more impervious the barriers separating higher education from society. Thus they sought "critical distance from prevailing social forces for at least long enough to change the surrounding society".⁴⁷ This is an additional reason why "two ideals of neutrality" should be distinguished, to wit "institutional autonomy" and "scholarly detachment".⁴⁸

In any case, engagement with society at large did not necessarily entail forsaking the realm of higher education. Institutions and spaces that worked as intermediaries between science and society of course also emerged within colleges and universities. Sometimes they lead to the creation of 'alternative' institutions and spaces mirroring or playing with academic specificities. This happened, for instance, in university-related events like 'free universities', followed later by 'women's universities'. Establishing alternative institutions such as 'free' or 'critical' colleges and universities was a core endeavour inspired by political approaches to the reform of learning and teaching in higher education. Under the auspices of *Students for a Democratic Society* (SDS) and its ilk, some 100 such parallel facilities have been established in the USA since 1965.⁴⁹ Such spaces of academic experimentation—or academic counter-institutions—found parallels in other countries such as Italy, Great Britain, the Netherlands, Germany and France ('Summer Universities').⁵⁰ Theresa Nisters' chapter in this issue considers the topic of founding parallel institutions from the perspective of art history.

Consequently, the 1960s-1980s period witnessed a lengthy debate over which approaches should be excluded because they were too 'political', and which were by contrast eligible for adoption as routine scientific procedures. Moreover, that period

46 See Annemarie van de Vusse: Letters to the Editors.

47 Ibid.

48 Ibid., pp. 553–556.

49 Reuben: Reforming the University, pp. 154–157; Andrew Jewett: The Politics of Knowledge Production in 1960s America, p. 552; Jon Agar: What Happened in the Sixties?, p. 582.

50 Gerd-Rainer Horn: The Spirit of '68: Rebellion in Western Europe and North America, 1956–1976, Oxford 2007, pp. 198–201; Caroline M. Hoefferle: British Student Activism in the Long Sixties, pp. 83–87; Rudloff, in this issue.

was characterised by shifts in topics of research and learning, in scientists' conception of themselves, and in academic practices—all as consequences of interactions between social movements, protest, and academia.

Research Perspectives

Scholars who study contemporary links between social movements and knowledge explain—from a variety of standpoints—why the relations between processes of knowledge formation, science, and social movements deserve closer scrutiny. Expectations are sometimes extremely ambitious. Scholars, for instance, assume “that many powerful critiques and understandings of dominant ideologies and power structures, visions of social change, and the politics of domination and resistance in general” emerge from social movements, thereby showing the “significance of the knowledge-production dimensions of social movement activism”.⁵¹ Others characterise interactions between academic knowledge and social movements as potential “missing links,” both in the social production of knowledge and in broader processes of political and social change”, as

new ideas of nature and society have often first emerged outside the world of formal scientific activity, within broader social and political movements. Social movements have also often provided audiences, or new publics, for the spreading and popularization of scientific findings and results.⁵²

Studying social movements and knowledge has been expected to enhance our understanding of “how contemporary progressive movements function as laboratories of democratic innovation”.⁵³ Notably, scholars have highlighted the prospect of

shedding light on the dynamics through which these collective actors come to be ‘prophets of the presence’ as they ‘announce the commencement of a change; not, however, a change in the distant future but one that is already a presence’.⁵⁴

The historical record, however, suggests that scepticism is in order regarding whether such exalted expectations are sustainable over the long term. From a historian's standpoint, many clues allow us to infer that, in addition to the productivity of social movements

51 Aziz Choudry/Dip Kapoor: *Learning from the Ground Up: Global Perspectives on Social Movements and Knowledge Production*, p. 1.

52 Andrew Jamison: *Science and Social Movements*, p. 13625.

53 Donatella della Porta/Elena Pavan: *Repertoires of Knowledge Practices*, p. 298.

54 *Ibid.*, p. 299, quoting Martin Melucci: *Challenging Codes: Collective Action in the Information Age*, Cambridge 1996, p. 1.

in knowledge production issues, we would be well advised to pay close attention also to contingencies, ruptures and contradictions. Some initiatives for change in academic knowledge formation eventually escaped the control of their initiators or lead into blind alleys.⁵⁵ In other cases, proposals became institutionalised, but only at the price of programmatic losses. This occurred in the case of science shops. Some of them became deradicalised and professionalised in order to survive. Others remained independent and retained their radical character, but were deprived of institutional recognition, and eventually their survival was threatened.⁵⁶

This encourages reflection on possible interactions between social movements and modes of knowledge formation aside from whether they achieved their direct goals or not. The terms ‘alternative project’ and ‘alternative draft’ used in this special issue are meant to build bridges between the practices and challenges of academic knowledge formation, which—despite their differences—share rejection of the *status quo* and a claim to being counter-models. These ranged from the New Left’s anti-capitalist and Marxian critique of science and higher education through practical reform efforts influenced by new social movements, the alternative scene and the counterculture, all the way to the penchant for non-academic and non-Western sorts of knowledge that characterises New Age thinking. Use of the term alternative *draft* takes inspiration from the artistic practice of drafting.⁵⁷ It is meant to open parallels to creative approaches to developing ideas and forms, in the sense of outlining, sketching and modelling. Thereby, it is intended to convey an attitude of aloofness toward the *status quo* that results in a quest whose course and outcome are undetermined. In particular, speaking of alternative drafts is an exhortation to enquire not only into cognitive concepts and ideas of science, but also into the creative and experimental aspects of alternative projects in academic knowledge formation, and the media through which they take form and are disseminated.

- 55 For a research project that went off limits, see D. Graham Burnett: *Adult Swim: How John C. Lilly Got Groovy (and Took the Dolphin with Him)*, 1958–1968, in: David Kaiser/W. Patrick McCray (eds.): *Groovy Science*, pp. 13–50. As example for a problematic project in teaching and learning, see the report about group learning at a university in the North of Germany by Eckstein/Hrabowski (eds.): *Gruppendynamische Arbeit*. Gerd-Rainer Horn: *The Spirit of ‘68*, pp. 203–206, discusses the case of the Higher Institute for Social Science in Trento, Italy 1968/69.
- 56 Joseph Wachelder: *Democratizing Science*. With similar assumptions about the relation between processes of establishment and de-radicalisation in the women’s movement and in ethnic studies, see Stefanie Ehmsen: *How the Women’s Movement Changed Academia*, pp. 36–50; Reuben: *Reforming the University*, pp. 161–168.
- 57 Conceptual reflections on the practice of drafting are offered by Barbara Wittmann: *Denk- und Werkzeuge: Ein Entwurf*, in: Barbara Wittmann (ed.): *Werkzeuge des Entwerfens*, Zürich 2018, pp. 7–35.

During the period covered by this essay, the term ‘alternative’, when used to describe attitudes and behaviour, was strongly associated with the political left and the counterculture. In historiography, the word sometimes has positive associations. Gerd-Rainer Horn, for example, wrote that the outstanding feature of the 1968 protest movements was their skill at formulating counter-proposals:

The most truly radical potential of 1968 lay precisely in its highlighting of the possibilities of a different organization of social life. 1968 pointed the finger at the existence of historical alternatives to dominant patterns of politics, the organization of production and the shaping of modern culture across the world.⁵⁸

Recently, however, the connotation of the term has experienced a shift that calls for caution when using it. In the political arena, the phrase ‘alternative facts’, coined by Donald Trump’s spokeswoman Kellyanne Conway in 2017, and use of the term in the name of a new right-wing German political party that calls itself ‘Alternative for Germany’ (*Alternative für Deutschland*) give the word new and ominous connotations.⁵⁹ This shift in meaning reminds us that political agents of any persuasion—without restriction—can propose their own project as an improvement over an existing one, while denouncing the latter as the embodiment of the *status quo*. Accordingly, the term ‘alternative draft’ leaves much room for the imagination. What is relevant here is its core meaning, as “offering or expressing a choice”.⁶⁰

The papers collected in this special issue give different answers to the question of when and how proposals submitted by social movements interacted with academic knowledge formation, and which factors were relevant to the fate of such alternative projects. The essays by Martin Löhnig, Anna Wellner and Wilfried Rudloff show that alternative approaches to research, teaching, learning and publishing could be incorporated into standard scientific processes. Yet none of the authors tells a tale of uninterrupted triumph. Instead, they chronicle processes of renunciation, gradual adjustments, and reciprocal compromise. These processes were shaped by a multitude of disparate influences. Among them are factors as diverse as how radical proposals were, the political background and historical antecedents of certain approaches, which methods were employed to promote an innovative approach both within universities and outside them, the organisational

58 Gerd-Rainer Horn: 1968: A social movement *sui generis*, in: Stefan Berger/Holger Nehring (eds.): *The History of Social Movements in Global Perspective: A Survey*, London 2017, pp. 515–541, p. 516.

59 On the shift of ‘alternative’ from a left-wing term to the right, see Wolfert van Rahden: *Alternative: Zur Politischen Karriere eines Begriffs*, in: Falko Schmieder/Georg Toepfer (eds.): *Wörter aus der Fremde: Begriffsgeschichte als Übersetzungsgeschichte*, Berlin 2018, pp. 23–30.

60 <https://www.merriam-webster.com/dictionary/alternative> (last accessed 1 February 2018).

structure of each university, how research was funded, the logic inherent to each publication format, and subjective factors such as the self-interest and the desires of students, faculty and staff involved.

‘Alternative Drafts’ and ‘Conventional Science’: Images of Academic Knowledge Formation beyond Dichotomies

How do attempts to change academic knowledge formation affect drafts and images of academia in general? Answering this question is not easy. Consequently, we must devise a suitable method for thinking about it. I feel some insight into this issue might be gained from taking a closer look at cases in which a draft of academic knowledge formation and its counter-project were both presented together. In other words, I propose to examine cases where an alternative project of academic knowledge formation was juxtaposed and compared with a model designated as representing the *status quo*. Below, I discuss three exemplary cases, chosen for their diversity. By analysing these examples, I hope to reveal some implications of alternative drafts for perceptions of science in general, and to thus provide an impulse for further reflection on the matter.

The *first example* is taken from a brochure from the early 1990s that reports on the experiences of the science shop movement.⁶¹ The booklet was published by “Academic Writing Publishers” (*Verlag für Akademische Schriften*) in a collection called “Socially Responsible Science” (*Wissenschaft in gesellschaftlicher Verantwortung*). It contained a summary of motives and assumptions concerning what science was and what it should be, viewed against the backdrop of the experiences of science shop practitioners in the decades before. In the booklet, a figure listed central features of “established science” and “science in science shops” on two facing pages.

The figure set forth the traits of each model, listing in loose sequence the subject matters, methods, goals, epistemologies and normative claims of ‘established’ and ‘alternative’ science. Whereas the established model was pictured as refraining from questioning science, the alternative project (in the shape of science shops) was said to foster scepticism. Established science supposedly claimed that its findings were value-free,

61 Guido Block-Künzler/Dittmar Graf: *Wissenschaft von unten: Zwischenbilanz und Perspektiven der Wissenschaftsladen-Bewegung*, pp. 18–19 (“Gegenüberstellung von Eigenschaften konventioneller Wissenschaft und solcher, wie sie von Wissenschaftsläden angestrebt wird”). Terms and quotes given from this and the following sources have been translated by the author.

thus exempting the scientist from responsibility. By contrast, the model on the opposite page was supposedly characterised by rendering explicit any underlying subjective values and interests and by being aware of scientists' responsibility for their research. Thus, the arrangement juxtaposed 'established' and 'alternative' science as each other's direct logical opposites: "hierarchically organised" stood against "grassroots democratic organisation"; a "preference for analysis, discipline and reductionism" contrasted with "synthetic, interdisciplinary". "F. Bacon control of nature" was set against "harmony with nature", "science as religion" countered by "science as a component of society that may be legitimately criticised". And while the champions of established science were portrayed to "tread a beaten path", science shops sought ways to "forsake some paths so as to explore new ones" according to the figure.

While it seems that these attributes were listed in random order, the arguments themselves were clearly formulated in binary fashion. In this case the positively connoted project of an 'alternative science' yielded a repellent image of conventional science in a model shorn of ambiguity. The manner of presentation itself follows a rather conventional division of the text page. In a slight contradiction to its content, it is dominated by a typography that thwarts any attempt to break out or experiment. This indicates that alternative projects and their images of science are not solely characterised by their content and message, but also by their style of exposition and argument.

As the *second example* will illustrate, alternative drafts can also resort to non-textual expedients and venture into the realm of the artistic and the creative. It is taken from a photo book published by the "Federation of Democratic Scientists" (*Bund Demokratischer Wissenschaftler*) to mark the tenth anniversary of the founding of Bielefeld University—a West German university in the province that I myself attended. The "Federation of Democratic Scientists" was a group of academics officially registered in 1974 that campaigned for what they saw as democratic advancements in academia and beyond, for instance in issues of employment, political engagement, and broader reforms in research and teaching.⁶²

In the publication⁶³, a pair of photographs presented scenes of what was purported to be 'conventional' and 'alternative' teaching and learning. One photo depicted a student in the university library. The student was shown reading alone while seated at an exceedingly long table. Surrounded by piles of books, he huddled with his arms held in front of him

62 <https://www.bdwi.de/bdwi/organisation/index.html> (last accessed 15 July 2018). See also Nikolai Wehrs: *Protest der Professoren: Der Bund "Freiheit der Wissenschaft" in den 1970er Jahren*, Göttingen 2014, pp. 317–325. According to Wehrs, p. 325, the "Bund demokratischer Wissenschaftler" reached its highest membership level in 1979 with about 2000 members in the Federal Republic.

63 *Bund demokratischer Wissenschaftler, Sektion Bielefeld (ed.): 10 Jahre Universität Bielefeld: 10 Jahre Studienreform*, Bielefeld 1979.

as if for protection. The photo's perspective emphasised the geometric arrangement of the tables, which were arranged in parallel rows that appeared to align and constrict the student's body. The caption labelled the books a "palisade" isolating the student from his surroundings. The situation described seemed quite threatening on the whole, and the caption heightened the menacing undertone by listing the prohibitions to which students were subject in the library: no eating, no smoking, no coffee and no talking.⁶⁴

This photo was contrasted with the photo of a learning group. Eight people sat around a table, facing each other. There were cups on the table, piles of paper were lying around. The wall in the background was also covered with paper. Again, the caption supplied the photo with an unmistakable message:

In contrast, the project group: Typical for the project group is the intensive cooperation of students and teachers addressing a problem, sometimes about several semesters. The creation of the learning space already signals a changed working situation. It is not the cool vacuum of the seminar, not the solitude of the library. Wall newspapers cover the walls, cups of coffee are on the table, and the table is a working tool, not a protective barrier. The project group is discussing, it is focused on a problem, everyone listens intensively.⁶⁵

Whereas the photo book characterised taciturn labour as synonymous with detachment and isolation, it placed the juxtaposed image of the 'project group' in a situation of conversation and exchanges.

Taken together, the photographs called into question the notion of rationally planned, goal-directed research and education, and instead highlighted the importance of enjoyment and sensuality for acquiring knowledge. At the same time, they privileged a specific form of social interaction and presented it as a prerequisite for successful learning. Teamwork was portrayed as the core of this social interaction. Students and lecturers were expected to listen to each other and exchange ideas; they were supposed to appropriate jointly the space of higher education and strive to cooperate zealously to solve a problem.⁶⁶

The use of photographs and text together created an image of knowledge formation and its subjects that conjoined self-conceptualisations and social movements' aspirations with the hopes and aspirations fostered by a young reform university. The manner in which protagonists were shown was determined by notions of what the university was and

64 Ibid., p. 213. The caption reads: "It is forbidden to smoke, to have a coffee, to eat or to talk in the library. Each working space is circled by a palisade of books, behind which each student is struggling with his topic."

65 Ibid., p. 215.

66 On the malleability, historicity and relevance of images of the scientist, see Thomas Etzemüller: *Ins "Wahre" rücken: Selbstdarstellung im Wissenschaftsbetrieb*, in: *Merkur: Deutsche Zeitschrift für europäisches Denken* 69 (2015), pp. 31–47.

what it should be, in accordance with certain ideals of how knowledge should emerge and how learning could be improved. The photos convey an ideal of collaborative teaching and learning that encompassed several levels of meaning. One underlying tone seems to be a critical attitude toward capitalism, expressed in the desire to attain a stage of social development in which competition between individuals is no longer the principal motivation for their efforts. Another concept that appears is that of dialogue and cooperation among scholars.⁶⁷ Also present are a stress on pleasure and sensuality that seems influenced by an alternative subculture, and bridges to everyday life.⁶⁸

Again, the relation between alternative science and established science was presented as a dichotomy. In the photographic arrangement, the teamwork and purported community spirit that characterised alternative learning were juxtaposed with an image of established learning that was deliberately staged for this purpose. Presenting the student in isolation, the image of established science was stiffer, more artificial and contrived than its counterpart. As in the first example—the brochure about the science shop movement—, the image of established science is explainable more as an antithesis to alternative science than, as might be expected, the other way around. From this, we can fairly infer that so-called ‘conventional’ science and academic practice cannot be regarded as pre-existing entities being subjected to an *a posteriori* critique. Being purposely constructed as polar opposites of a desired outcome, such images can also be considered an effect of alternative counter-projects; they relied on images of epistemic, democratic and social improvements against which they could take shape.

This is also evident in the *third example*, the art project *Académie Worosis Kiga* by the artist Gérard Gasiorowski, which Theresa Nisters discusses in the first paper in this special issue. Here the setting is not a university or technical college, but a different venue of higher education, namely an art academy. The art project was exhibited in Paris in 1982. As Nisters shows, the artist’s tale of a fictional art academy nestled in a French mountain region is at the same time a narrative about learning an artist’s handiwork at a purportedly ‘conventional’ art academy and modes of artistic productivity. The artist postulated that the fictional students at the academy were compelled to spend their course of studies drawing a hat. The professor at the top of the academy signed and stamped the drawings if he found them pleasing. Eventually the students rebelled against the institution and murdered its director. In my reading, the fictional academy can be seen as an alternative

67 On historicizing notions of cooperation and concurrence in the history of science, see Karin Nickelsen: Cooperation and Competition in the Sciences, in: NTM 24:2 (2016), pp. 119–123.

68 This resonates with David Kaiser/W. Patrick McCray (eds.): Groovy Science, p. 8, who point out, “thinking about groovy science can help us identify the constant interweaving of science and technology with the fabric of daily life—even when the fabric was an exuberant, paisley-patterned polyester.”

draft that simultaneously contained and formed the portrayal of an established art college. Accordingly, project and counter-project merged and enabled a discourse of sorts on methodology in artistic production where the source of that which was portrayed as 'established' was actually the alternative model.

All three examples illustrate the diversity among different alternative projects and the variations among their content and their styles of reflection, yet jointly they indicate that it might be useful to sometimes reverse habitual lines of reasoning. Besides asking how alternative science and modes of knowledge formation responded to conventional science and what changes it proposed, we should perhaps also enquire how the drafting and definition of alternative counter-models shaped the features of what, then, came to be seen as 'conventional' science. I surmise that social movements activism in science and higher education implicitly made an impact on images of 'conventional' science, and consequently also contributed to notions of what is seen as 'standard' or establishment processes of academic production of knowledge, and their shortcomings. What would happen if we reversed our perspective accordingly? What would be lost?

Conclusion: Collective Action as a Significant Factor in the History of Academic Knowledge Formation

As we have seen, alternative projects can be antagonistic and polemical, and the examples suggest that a genuine drive and motivation for reforming academic knowledge formation sometimes can be supplied by a derogatory or mocking attitude.⁶⁹ However, even binary models of an 'alternative' science opposed to 'conventional' science can set in motion complex processes and adjustments capable of influencing how knowledge will be generated subsequently. The history of such entanglements between social movements and academic knowledge formation is not suited to unambiguous narratives, since new approaches can peter out, fail, or lead into blind alleys. Conversely, when innovations are accepted and appropriated, it is not unlikely that they are transformed beyond recognition. And despite this predicament, it is undeniable that protests and social movement activists are capable of durably making an impact on processes of knowledge creation, learning and teaching. Thus, the history of social movements recommends valuing collective action as a significant factor in the history of science and knowledge. Reflections about academic knowledge formation, as well as meta-reflections and meta-meta-reflections, are useful tools for this purpose.

69 For present-day debates, see for instance Francesca Coin: On Quitting, in: *ephemera: theory and politics in organization* 17:3 (2017), pp. 705–719.

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