

Science in the snow. Sixty years of international collaboration through the Scientific Committee on Antarctic Research. David W. H. Walton, Peter D. Clarkson and Colin P. Summerhayes. 2018. Cambridge: Scientific Committee on Antarctic Research with Victoria Press. xi + 321 p, illustrated, paperback, ISBN 978-0-948277-55-9 (limited edition) (e-Book ISBN 978-0-948277-56-6).

Celebrating SCAR: crafting an institutional autobiography

The Scientific Committee on Antarctic Research (SCAR) is a non-governmental scientific organisation originally established under the umbrella of its likewise non-governmental parent the International Council of Scientific Unions (ICSU). Founded in 1931 ICSU was devoted to international cooperation for the advancement of science. In former days this meant natural sciences but nowadays it also includes the social sciences and historical aspects relating to Antarctic science. While keeping its acronym the parent organisation's name has changed, most recently in July 2018 when it merged with the International Social Science Council, whence the two organisations were jointly re-branded, now forming the International Science Council (ISC). This move was motivated by the importance of understanding the role and impact of science in society, and with an eye to promoting both policy for science and science for policy as well as underlining scientific freedom and responsibility to defend the free and responsible practice of science.

This richly illustrated book gives an account of the evolution of SCAR from the time of its birth in 1958 in the wake of the International Geophysical Year (IGY 1957–58) up to and including its 60th birthday. It is the second (now expanded) edition of a book previously issued in connection with the organisation's 50th birthday. The primary focus is on the inner life of SCAR, its structure, and its purpose in bringing together members of national scientific communities to plan, coordinate and collaborate through Antarctic research programmes. The reader is provided with detailed descriptions of the science done and how research agendas, themes, as well as priorities have changed over time, plus how results were and are disseminated. Another focal point is the character of SCAR's interplay over time with a multinational political realm, particularly that of the Antarctic Treaty System (ATS). Also formed in the wake of the IGY, one year after SCAR, the Antarctic Treaty came into force in 1961. Consultative Parties to the AT make up an intergovernmental regime that stands outside the sphere of the United Nations and manages Antarctic affairs. In some of its decisions the ATS relies on input from SCAR as an independent actor for scientific advice. An interesting thread in the book concerns the implications this function of SCAR has in theory and practice. Instructive is the clarification the authors present of a necessary distinction (one they say sometimes tends to be confused) between non-governmental and intergovernmental entities in the context at hand. The history of SCAR and the boundary management of its relationship with the ATS is thus an interesting site for policy studies.

The three authors are eminently equipped when it comes to crafting the history of SCAR. They know it from the inside and readily find their way around the archives, bulletins and other materials accumulated at the Scott Polar Research Institute where the secretariat has existed since 1959. Walton represented SCAR at 14 Antarctic Consultative meetings (ATCMs) since 1992. He headed SCAR's work relating to environmental affairs and protection for a decade since that same year, and when a standing committee was created within SCAR for managing its interactions with the Treaty he chaired this group for the first four years (2002–2006). Clarkson was the executive secretary of SCAR during 1989–2005, and Summerhayes became the first executive director when that position was created in 2004 and he continued as such until 2010. All three were intimately involved in the crucial turning point around the time of the millennium shift when SCAR was radically revamped and modernised, moving from a traditional structure and mode of operation to a vibrant "New SCAR". Looking back they confirm (p. 259) how before the organisation's 30th birthday oftentimes "activities were more like a men's club", initially with a small number of people meeting in a rather informal manner to exchange ideas and plans, and involving

only the 12 IGY countries, which increased to 15 in the year 1978 and counted four more 10 years later.¹

Expansion years after that plus the need to systematically engage with multidisciplinary research programmes and thematically oriented approaches, such as the International Geosphere–Biosphere Programme (IGBP) launched by ICSU in 1987 and a dynamic concept of Earth Systems Science, presented a challenge and precipitated internal tensions that came to a head a decade later. Already in the late '80s and early '90s there were calls to reexamine the objectives of the organisation in the face of an environmental turn and growing research on global climate change. The question of science for policy also came into a new light in 1991, when for the first time, SCAR was formally granted independent representation as an Observer and could finally speak directly in its own right (instead of as in earlier years only via inclusion in national delegations) at the ATCM. These and a number of other factors, such as the dropping of the logistics function (1988), which was instead made the business of COMNAP (Council of Managers of National Antarctic Programmes), were all significant in charting SCAR's new role.

A tendency to complacency already identified in the mid-1980s – when tackled in the late '90s – was successfully overcome, leading to radical revitalisation, new growth, a forward-looking vision and innovative initiatives like the advent of biennial Open Science Conferences. In mantling a significant leadership role in preparing for and carrying through the fourth International Polar Year 2007/08 the “new” SCAR proved its mettle. More recent highpoints that stand out include the systematisation of a research foresight and priority-setting function (Horizon Scan), mentoring schemes to help less advantaged countries develop relevant research skills, conscious cultivation of links between science and policy as an important field of activities, and the recognition that the Humanities need to be connected to science in an active and meaningful way.

All these and many more episodes in the life of SCAR are taken up in the book. Sometimes the reading gets dense because the documentation covers so many business meetings, symposia, contributions by key people and discussions of significant publications. As chronicling follows the sequence of all SCAR general delegates meetings (and those of the executive), which rotate amongst member countries, and the book records the decisions and activities of multiple science groups, as well as new and emerging issues that were generated, the narrative traces an unfolding of several parallel story lines. The reader has to hop back and forth between chapters to try and maintain an overview. The telling titles of the chapters (e.g. Chapter 2 - The Early Years (1958–1967); Chapter 3 - The Consolidation Years (1968–1977); Chapter 4 - The Expansion Years (1978–1987)), however, serve as signposts indicating a progression of overarching trends. Small boxes with synoptic CV's and images of SCAR presidents over the years are also helpful in keeping one's bearings as a reader.

Further, the text is also enlivened with lots of well-placed pictures associated with meetings, social events around these, striking logos, booklet covers, scientists in the field and labs, and scenes of Antarctic nature and stations; and we find many interesting

anecdotes sprinkled throughout the book. This means the volume also has a place as an attractive coffee-table book to be leafed through now and then.

Detailing of activities conducted through a maze of working groups and specialist groups that have come and gone and new ones emerging, all of them with their own acronyms, makes it an important sourcebook of facts and data. One can quickly find a snapshot of focal points and agendas in Antarctic research at any one time, which SCAR has helped coordinate over the years in geosciences, life sciences and physical sciences.

There is also unique insider information from behind-the-scenes on the role of SCAR members played regarding science diplomacy and advice to the ATCMs. One example concerns a minerals convention that never made it, and the design and implementation of the Madrid Protocol that came instead to strengthen environmental conservation and protection.

Sometimes when summing up a particular point the authors interject their own evaluations. Thus, when they reflect on an inherent inertia and a notable reluctance within SCAR to embrace new opportunities, strategic thinking and a more positive attitude towards delivering advice to the AT-parties during the “expansion years”, they write: “It seems surprising in retrospect that so many scientists simply failed to see that this science diplomacy had immense value for the scientific community in ensuring that an independent scientific voice was always injected into the legal developments, and that the legitimate interests of the scientists themselves were represented in this key international forum. There was apparently a feeling amongst many scientists that politics had nothing to do with their legitimate interests and SCAR should avoid getting involved. The reality, of course, is that politics is and always had been the underpinning for Antarctic science and we forget that at our peril.” (p. 74). With the “rejuvenation years” and the development of “the New SCAR” this insight was an important driving factor and we can see how SCAR successfully combines scientific integrity and policy relevance.

A critical reality however remains: unfortunately, those responsible for policy making often do not fund the science needed for decision-making (Hughes et al., 2018).

Science in the Snow contains an extensive section of Appendices (52 pages in all) that serve as essential reference material and chronologies when making ones way through the various chapters. Here a list of the dates and places of the successive Antarctic Treaty Consultative Meetings would also have been useful. There is an index of person names, but unfortunately no subject register, which is understandable considering the myriad of entries that would have to be added.

The book is an updated and expanded version of the earlier edition, *Science in the Snow, Fifty Years*. It was initially written and edited by David Walton and Peter Clarkson as a stocktaking report to celebrate SCAR's 50th anniversary, at which time the organisation counted 34 full member countries, and the fourth International Polar Year was in full swing. Colin Summerhayes contributed material covering crucial developments, a compilation that had to be condensed, appearing as “The New SCAR, 2004–2008” and jointly with his two colleagues he summed up “The Achievements of SCAR”. Around the same time some other historically oriented texts focusing SCAR were also produced (compare Summerhayes, 2008, 2011a,b; Walton, 2011).

The second edition incorporates the earlier “additional material” in a more seamless manner and brings the institutional historiographical project up to date. It speaks to both the “hub of Antarctic scientists” (Nigel Bonner's term at the time of the 30th

¹An earlier historical account published by ICSU/SCAR coincided with SCAR's 30th birthday and was commissioned as input for the discussion of the “Antarctic Question” in the United Nations (see Fifield, 1988, and Nigel Bonner's review in *Polar Record* 1988). It was around that time my own fascination with Antarctic science and its interplay with politics also took form and benefited from Nigel's presentation at a symposium I organized 1991 at the University of Gothenburg in Sweden (cf. Bonner, 1993).

birthday book – 1988), which is now immensely larger than it was in the early days, while SCAR itself is more multidisciplinary, cross-cutting and forward looking. Its international network has grown to thousands of scientists who share a common ambition to carry on research for the benefit of society. Additionally, regular collaboration now also occurs with a sister organisation (the International Arctic Science Committee, IASC, founded in 1990) when it comes to bi-polar issues in science. Like SCAR, the IASC is also a committee under the common parent body, the ISC. Further, SCAR now has an attractive and easily navigable web page with information about activities of its science groups, outreach activities, capacity-building fellowship programmes, prizes, the Open Science Conferences to draw attention to Antarctic issues, etc. Although SCAR is no longer a club for men the book does reveal a gender gap that we are told is now being consciously addressed by encouraging the participation of women in Antarctic science.

I am glad to see that the authors in their penultimate chapter briefly mention the birth of a Standing Committee on the Humanities & Social Sciences (SC-HASS). This is a forum that promotes research into the history of Antarctic science, discusses biographical material and interviews, traces questions of values, considers changing images of Antarctica in art and literature, and analyses politics and policy, interaction between SCAR and the AT, impacts of tourism and various aspects of science in action in Antarctica and the Southern Ocean. Apart from being a mine of information that will interest many scientists and amongst some of these trigger memories of times past, the present volume is an invaluable sourcebook for historians and social scientists concerned with analysing changing trends in Antarctic research. With its fount of facts and data it may also serve as a point of departure for oral history projects. (Aant Elzinga, Department

of Philosophy, Linguistics and Theory of Science Gothenburg University, Box 200, SE 40530, Goteborg, Sweden (aant.elzinga@theorisc.gu.se)

References

- Bonner, W. N.** (1988). The work of SCAR– review of Fifield R. 1988. *Polar Record*, 24(159), 254–255.
- Bonner, N.** (1993). The science/politics interface in development. In Elzinga, A. (Ed.) *Changing Trends in Antarctic Research*. Dordrecht: Kluwer Academic Publishers, 103–110.
- Fifield, R.** (1988). *International Research in the Antarctic*. Oxford: Oxford University Press, for the Scientific Committee on Antarctic Research (SCAR) and ICSU Press.
- Hughes, K. A., Constable, A., Frenot, Y., López-Martínez, J., Mclvor, E., Njåstad, B., ... Xavier, J. C.** (2018). Antarctic environmental protection: Strengthening the linkages between science and governance. *Environmental Science & Policy*, 83, 86–95.
- Summerhayes, C. P.** (2008). International collaboration in Antarctica: the International Polar Years, the International Geophysical Year, and the Scientific Committee on Antarctic Research. *Polar Record*, 44(231), 321–334.
- Summerhayes, C. P.** (2011a). *A History of SCAR*. Cambridge: SCAR Occasional Publication, 93 p.
- Summerhayes, C. P.** (2011b). The New SCAR, 2004–2011. In Walton, D. H. W. & Clarkson, P. D. (Eds.) *Science in the Snow. Fifty Years of Collaboration through the Scientific Committee on Antarctic Research*. Cambridge: SCAR, 159–202.
- Walton, D. W. H.** (2011). The Scientific Committee on Antarctic Research and the Antarctic Treaty. In Berkman, P. A., Lang, M. A., Walton, D. W. H., & Young, R. (Eds.) *Science Diplomacy. Antarctica, Science and the Governance of International Spaces*. Washington, DC: Smithsonian Institution Scholarly Press, 75–88.

DOI: [10.1017/S0032247418000578](https://doi.org/10.1017/S0032247418000578)