

S002-01

Zoom meeting A : 11/2 AM1 (9:00-10:30)

9:10~9:25

研究データの保存・管理とオープンサイエンスに関する国際動向：学協会の議論にむけて

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International trends of research data preservation/management and Open Science –toward a deeper insight in the scientific society

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In recent years, the trend of "Open Science" and "Open Data" has been increasingly active in Japan, especially since the agreement on open research data at G8 2013. Cabinet Office and the Council for Science and Technology and Innovation (CSTI) have played central roles to it (a top-down approach) within the government. At the G7 Science Ministers' Meeting 2016, the G7 Open Science WG was proposed by Japan and was agreed by the G7 ministers. Today in the United Nations, SDGs, COVID-19, and Open Science have been discussed in the same conference as those are closely related to each other in important contexts.

While the author has participated in the activities related to the G7 and the Cabinet Office. he also recognized critical importance of discussions and consideration of those topics in academic societies (whether we accept all or part of those principles and practices in which way), and has been trying stimulation and advocacy for the community (even though he was told to speak the same things all the time) because the way of the science has to be based on how the scientists consider the future of science (as a bottom-up approach).

While Open Science includes the discussion of open access journals, the research data issue is especially emphasized in international academic policies and government investment argument. In parallel with conceptualization of the FAIR data principles (Findable, Accessible, Interoperable, Reusable)., an formerly often addressed phrase "Open as default" has developed and was formed into "As open as possible, as closed (secured) as necessary".

On the other hand, changes in the data policies of foreign academic journals and publishers are having a significant impact on researchers in Japan. This is not a temporary change of the international trend. For example, in the U.S., the Coalition for Publishing Data in the Earth and Space Sciences (COPDESS), supported by the NSF and other organizations, has been working since 2014 to get academic societies, academic publishers, research funding agencies, and other interested parties together to discuss the future of the earth and space science data and publication activity. The journal policy change is not a sudden mind change, but it is based on the long-standing discussions by international experts in those community. Not only NSF, NIST, NIH, Royal Society, OECD, and ICSU (now ISC) etc. are aligned in this direction in principle. The policy of requiring authors to publish papers and to request to place the data in an open data repository or at least compliant to the FAIR principle has become an international trend, with no signs of disappearing..

While other countries including Europe, US and recently involving South America and Africa etc., research data repositories and data DOI registration have been developed, established and managed by investment of public bodies and academic industries and data DOI registration. In Japan, the Science Council of Japan and other organizations have been discussing the issue, but it is difficult to say that Japan has developed a sufficient data repositories and data management infrastructure to immediately give such trustworthy services to the research community. The research community and academic societies need to face the current status and future possibility of academic research in the digital age and need to try to consider how we can develop scientists' research environment in the better way.

SGEPSS is a society that has been promoting cutting-edge activities to open up new science such as space flight vehicles and large atmospheric radar etc.. It has been a long time since we were told that we live in an information society, and the government's policy to develop the society through digitalization can be seen in the 6th Science and Technology Innovation Plan. Fruitful discussions is being expected in the science community.

近年の「オープンサイエンス」や「オープンデータ」の潮流は、我が国ではとくに 2013 年 G8 での研究データオープン化合意以降、活発化し、政府内のトップダウンアプローチとして、内閣府および総合科学技術イノベーション会議が対応してきた。有識者検討会開催とともに、2016 年 G7 では日本発案による G7 オープンサイエンス WG 設置が G7 科学大臣会合において号され、以来 G7 枠組みでの先進諸国、さらに近年は国際連合における SDGs、COVID-19 およびオープンサイエンスが同じ土俵で議論されるような時代となってきた。

筆者はこれらの G7、内閣府関連活動に参画してきたのと同時に、ボトムアップの研究者による考察、議論が重要である、という認識のもと、国内学協会での議論の活性化にも関与してきたつもりである。

オープンサイエンスには、オープンアクセスジャーナルの議論も含まれるが、学術政策や政府投資において重視されている研究データに関しては、例えば FAIR データ原則 (Findable, Accessible, Interoperable, Reusable) のような概念整理の進展と並行して、国際会議などにおけるかつての「Open as default」のと掛け声も、「As open as possible, as closed (secured) as necessary」へと変化してきた。

一方では、海外の学術ジャーナルおよび学術出版社における論文発表時のデータの取扱いポリシーの変化が、我が国の研究者にも大きな影響を及ぼしている。これは一過性の問題ではなく、例えば米国では NSF 等が支援して COPDESS (Coalition for Publishing Data in the Earth and Space Sciences; コップデスと発音する) が 2014 年より、学協会、学術出版社、研究資金配分機関などの関係者が今後の地球・宇宙科学データと学術出版との関係の議論を開始し、論文出版とそこでもちいられたデータの公開要請がセットで著者にもとめられる等のポリシーは国際潮流となり、今後これが消えるきざしはない。

海外は、公的資金や学術出版社資本による研究データ保管庫 (データ・リポジトリ) でのデータ保存とデータ DOI 登録の基盤整備が進んでいく中で、我が国では、日本学術会議その他での議論も進んでいるが、まだ研究コミュニティが頼れるだけのデータ保存・管理インフラ整備が進んでいるとはいえない。先進諸国や、近年は南米やアフリカ諸国でもこうした議論が進展する中で、まずは、研究者コミュニティや学協会が、デジタル時代の学術研究の有り方とその国際趨勢を見据えて、必要なときに必要な声をあげられるように議論を進めておくべきであろう。

SGEPSS は、宇宙飛翔体、大型大気レーダーなどの新たなサイエンスを切り開く最先端の活動を進めてきた学会である。情報化社会と言われて久しいが、デジタル化による社会の発展を目指す国の政策は第 6 期科学技術イノベーション計画においてもみとれる。ぜひ当学会での実のある議論を期待したい。