

History, Philosophy & Sociology of Plant Science



HPSPS: We Exist, Come to Meet Us!

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What do historians, philosophers and social scientists interested in plant science do?

- Trace the historical roots and motivations of contemporary developments
- Compare contemporary plant science to earlier periods
- Examine the relations between plant sciences, botany, breeding and agricultural practice
- Analyse the use of different plants and methods through history
- Understand community dynamics and funding trends in plant science
- Examine past and current attempts to integrate different parts of plant science (e.g. ecology, physiology, phylogeny), and how they could be improved
- Study the relation between plant science and other parts of biology
- Examine how systems, synthetic and data-driven approaches are being developed, and with which significance in the long term

Why is dialogue between science, humanities and social science important?

- Document and analyse developments in your field and their significance for science and society at large
- Research history of current approaches and ideas, which can provide instructive lessons for the present
- Enable dialogue with policy, funding bodies, civil society organisations, general public

Be involved and keep informed! HPSPS Link on the UK Plant Science Federation Page:

<http://people.exeter.ac.uk/sl306/hpsps>

- Provide access to relevant resources (publications, posters, projects, contacts)
- Reporting new developments
- Advertising upcoming events
- Listing relevant expertise across the UK: find out if there is a relevant group at your university, and whether one of us can help you tackling emerging issues in your research

An example from my own research:

The history of *Arabidopsis thaliana* as a model organism – Why such success?

- (1) Its biology (both wild' and 'induced' traits)
- (2) Timing (e.g. situation in animal genetics)
- (3) Funding
- (3) Collaborative ethos and role models
- (4) Organisation (MASC, GARNet)
- (5) The collections, stock centres, databases
- (6) Interdisciplinary, integrative approach

→ The history of *Arabidopsis* exemplifies major developments in 20th century biology, which forwarded the discipline into the post-genomic era and created a new concept of 'model organism':

- ❖ transition into molecular plant science
- ❖ increasingly globalised and interdisciplinary nature of research
- ❖ crucial role of free and open sharing of results
- ❖ investments in standardisation and cyberinfrastructure

An example of collaboration:

letter on the historical background to and significance of the UK Plant Science Federation, published by the *New Phytologist*

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