

Jesuits in science: the third paradigm

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Presence of Jesuits in the world of science can be traced back to the first professors of mathematics of Jesuit colleges in the middle of the XVI century, specially to Clavius and the chair of mathematics in the Collegio Romano. We can divide the motivations for this presence, which I call paradigms, into two periods. The first up the suppression of the Society and the second from the restoration to about 1970. We are now faced with a new third paradigm if we want to continue this presence in the future. The first paradigm of the presence Jesuits in science was constituted by the felt need of their participation in the development of the new science in its epistemological justification. The most importance aspects of the scientific revolution was its introduction of the mathematical language in the study of nature and its foundation in experimental evidences with the abandon of the accepted medieval Aristotelian physics. Jesuits professors of mathematics, joined the currents of modern science and justified the use of mathematical analysis by defending that it constituted a true science even in the strict Aristotelian sense. Chairs of mathematics that existed in all the important Jesuit colleges covered also the subjects of astronomy, mechanics, optics and other physical disciplines as electricity and magnetism and their professors assumed rapidly the new scientific ideas. This movement abruptly came to an end with the suppression of the society in 1773.

The second paradigm began with the restored Society in 1814. One of the main aspects of the presence of Jesuits in science was, besides teaching in colleges and universities, the establishment of observatories. A large number of Jesuits participated in this activity. The paradigm of this period was based mainly on the apologetic argument against the extended mentality through the 19th and first half of the 20th century which openly declared the incompatibility of science and religion and attacked the Church of obscurantism and of being against science. Presence of Jesuits in science, mainly through their own scientific institutions, was considered as a clear argument against these accusations. The observatories in mission countries added the argument of scientific prestige in face of nonChristian societies. This type of Jesuit presence in science made crisis about 1970. The abatement of the apologetic mentality in the Church and the decay in the science versus religion controversy, together with the shift in the priorities of the Society

to the social justice issues after the 32 General Congregation, contributed to the end of this paradigm.

If Jesuit presence in science is to continue today, we are in need of a new paradigm. This must take into account, first of all, the influence of science and technology in our society, the changes in the practice of science today and the need of an active presence of the Church in the world of science. This presence must contribute to the inculturation and dialogue of the Church with the scientific culture. It must try to bridge the gap between the scientific and Christian communities and make present the Christian values to the scientific community and the scientific results, knowledge and language to the Christian community. It would need to have a two ways function, both of them necessary. Need of this presence is urgently felt, but ways of carrying it out are not yet clear. Jesuits by their scientific tradition are still called today to actively contribute to this presence. Own scientific institutions are, now, clearly out of the question and presence would have to be exercised through personal work of Jesuits in scientific centers.