Chapter 13

SPT Goes International

This chapter is difficult. I place it here because the next SPT president in our list was a Spaniard, Jose Sanmartin. But the chapter focuses, not on Sanmartin in particular but on international contacts of SPT. These contacts began with the cooperation of colleagues in what was then West Germany, and with the first international conference of the Society, hosted by German colleague Friedrich Rapp in Bad Homburg (a resort town near Frankfurt) in 1981. The third international conference, in 1985, was held at the University of Twente in the Netherlands. The 1993 conference was held in Peniscola (another resort town) in the northern part of the Valencian Community in Spain. I devote a special chapter, later in the book, to our Dutch collaborators, so this chapter has two parts, the first focusing on our German collaborators, the second on philosophy of technology in Spain.

Section 1. Germany

The proceedings of the Bad Homburg conference were published in separate books, in German and in English. The English version was published simultaneously in two series, *Boston Studies in the Philosophy of Science*, and the newly-minted series, *Philosophy and Technology*—both published by Kluwer (originally Reidel). A second German-hosted conference was held in Dusseldorf in 1997, but for a number of reasons (including a conflict with a German national philosophy conference held at the same time) the proceedings of that conference were not representative of the state of scholarship at the time either in SPT or in Germany. However, an earlier conference in the same year was hosted by Hans Lenk in Karlsruhe, Germany, with the collaboration of Evandro Agazzi and the International Academy of the Philosophy of Science as the academy's first foray into philosophy of technology. The proceedings of the Karlsruhe conference were first published in *Techné*, the electronic journal of SPT, and that volume is much more representative of the state of European philosophy and technology scholarship at the time, internationally but especially in Germany.

What follows is the table of contents of the *Techné* version of those proceedings (see spt.org on the internet), with enough background on each of the philosophers I take to be representative of the state of the art in Germany at the time to get the overall flavor.

Part I:

Evandro Agazzi (Fribourg) and Hans Lenk (Karlsruhe), "Advances in the Philosophy of Technology: Proceedings of a Meeting of the International Academy of the Philosophy of Science, Karlsruhe, Germany, May 1997; Introduction," sets the conference in context.

Kurt Hubner (Kiel), "Philosophy of Modern Art and Philosophy of Technology." The title suggests the content: primarily European focus.

Klaus Kornwachs (Cottbus), "A Formal Theory of Technology?" sketches out a formal theory; the question mark suggests the tentative character of the venture.

Hans Lenk (Karlsruhe), "Advances in the Philosophy of Technology: New Structural Characteristics of Technologies." The structure of contemporary technology, its systematic character in particular, demands changes in the philosophy of technology, making it more interdisciplinary.

Klaus Mainzer (Augsburg), "Computer Technology and Evolution: From Artificial Intelligence to Artificial Life." Computer technologies suggest that one needs to interpret them in evolutionary terms, possibly moving toward artificial life.

Part II:

Theodor Leiber (Augsburg), "On the Impact of Deterministic Chaos on Modern Science and Philosophy of Science: Implications for the Philosophy of Technology?" Chaos theory suggests, possibly demands, fundamental changes in both philosophy of science and philosophy of technology.

Hans Poser (Technical U., Berlin), "On Structural Differences between Science and Engineering." The title suggests the content.

Joachim Schummer (Karlsruhe), "Challenging Standard Distinctions between Science and Technology: The Case of Preparative Chemistry." Philosophy of technology in Germany now includes chemical technologies.

Part III:

Bernulf Kanitscheider (Giessen), "Humans and Future Communication Systems." Contemporary complex communication systems force us to consider new directions.

Karl Leidlmair (Innsbruck), "From the Philosophy of Technology to a Theory of Media." Similar to previous contribution.

Werner Rammert (Free Univ., Berlin), "Relations that Constitute Technology and Media that Make a Difference: Toward a Social Pragmatic Theory of Technicization." An exceedingly fine-tuned and complete theoretical definition of modern technology.

Friedrich Rapp (Dortmund), "The Material and Cultural Aspects of Technology."

Analytical philosophy of technology needs to incorporate cultural aspects of technological society.

Gunther Ropohl (Frankfurt), "Philosophy of Socio-Technical Systems." Recent advances in his systems approach to a general technology.

Ladislav Tondl (Czech Academy), "Information and Systems Dimensions of Technological Artifacts." A less formal systems approach, including engineering design.

Part IV:

Alois Huning (Dusseldorf), "Preferences and Value Assessments in Cases of Decision under Risk." Ethical approach closely linked to natural law theory.

Hans Mohr (Stuttgart), "Technology Assessment in Theory and Practice." More theory than practice.

Hans Lenk (Karlsruhe), "Conclusion: Technological Responsibility and the Humanities; the University of Karlsruhe." Lenk's standard approach emphasizing the responsibilities of technological actors, especially engineers, placed in a context of the long history of engineering humanities at the University of Karlsruhe.

Section 2. Spain

Jose Sanmartin was our first European president, and that was a welcome addition. But his body of work nowadays is mostly on particular technologies, such as genetic manipulation (see his book on "new redeemers"), and his recent work has been even more narrowly focused, devoted to the topic of violence in the contemporary world. There, much of his work has been archival, trying to put together an online set of documents related to violence that is the best in the world. More representative of the range of Spanish contributions to scholarship on philosophy and technology are the studies that Carl Mitcham collected, about ten years ago, in *Philosophy and Technology in Spanish Speaking Countries* (1993; volume 10 in the Kluwer Philosophy and Technology series). Here is Mitcham's introduction to that body of work:

Introduction

Philosophy of Technology in Spain

"Philosophy of technology in Spain . . . can be traced back to the work of Ortega y Gasset, who was himself one of the philosophical originators in this field of philosophy. But during the Franco years (1939–1975) Ortega's opening was left largely undeveloped. As in Chile, however, the return to democracy has led to the flowering of the philosophy of technology, especially within an interdisciplinary, interinstitutional effort known as the Instituto de Investigaciones sobre Ciencia y Tecnologia (INVESCIT or Institute for Research concerning Science and Technology).

"One of the best ways to judge the achievements of Invescit since its founding in 1988 is in terms of a series of publications it has sponsored, most but not all of which are authored by institute associates:

Jose Sanmartin. *Los nuevos redentores: Reflexiones sobre la ingenieria genetica, la sociobiologia y el mundo feliz que nos prometen* (The new redeemers: Reflections on genetic engineering, sociobiology, and the happy world they promise us]. Nueva Ciencia 1. Barcelona, Spain: Anthropos, 1987. Pp. 207.

Carl Mitcham. *Que es la filosofia de la tecnologia?* [What is the philosophy oftechnology?]. Trans. Cesar Cuello Nieto and Roberto Mendez Stingle.

Nueva Ciencia 2. Barcelona, Spain: Anthropos, 1989. Pp. 214.

Santiago Vilanova. *Chernobil: El fin del mito nuclear—El impacto informativo y biologico del mayor accidente de la industria electronuclear* [Chernobyl: The end of the nuclear myth—The information and biological impact of the greatest accident of the nuclear electric power industry]. Nueva Ciencia 3. Barcelona, Spain: Anthropos, 1988. Pp. 278.

Jose Antonio Lopez Cerezo and Jose Luis Lujan Lopez. *El artefacto de la inteligencia: Una reflexion critica sobre el determinismo biologico de la inteligencia* [The artifact of intelligence: a critical reflection on the myth of the biological determination of intelligence]. Nueva Ciencia 4. Barcelona, Spain: Anthropos, 1989. Pp. 286. [Lopez Cerezo has been strongly influenced by STS work, e.g., in the Netherlands.]

Andres Moya. *Sobre la estructura de la teoria de la evolucion* [On the structure of the theory of evolution]. Nueva Ciencia 5. Barcelona, Spain: Anthropos, 1989. Pp.174. [A scientist/philosopher.]

Manuel Medina and Jose Sanmartin, eds. *Ciencia, tecnologia y sociedad: Estudios interdisciplinares en la universidad, en la educacion y en la gestion publica* [Science, technology, and society: Interdisciplinary studies in the university, in education, and in public administration]. Nueva Ciencia 6. Barcelona, Spain: Anthropos, 1990. Pp. 222.

Josep Puig and Joaquim Corominas. *La ruta de la energia* [Energy path]. Nueva Ciencia 7. Barcelona, Spain: Anthropos, 1990. Pp. 480.

Gilbert Hottois. *El paradigma bioetico: Una etica para la tecnociencia* [The bioethics paradigm: An ethics for technoscience]. Nueva Ciencia 8. Barcelona, Spain: Anthropos, 1991. Pp. 205.

Jose Sanmartin, Stephen H. Cutcliffe, Steven L. Goldman, and Manuel Medina, eds. *Estudios sobre sociedad y tecnologia* [Studies concerning society and technology]. Nueva Ciencia 9. Barcelona, Spain: Anthropos, 1992. Pp. 334.

Nicanor Ursua. *Cerebro y conocimiento: Un enfoque evolucionista* [Brain and

knowledge: An evolutionist approach]. Nueva Ciencia 10. Barcelona, Spain: Anthropos, 1993. Pp. 377.

"As should be readily apparent, these volumes indicate a strong interest in issues arising from relations between society, modern biology, and biological technology. Five of the ten volumes (numbers 1, 4, 5, 8, and 10) are on genetic engineering, genetic theories of intelligence, evolutionary theory, and bioethics. A similar emphasis is reflected in the first and last papers contributed from Spain to the present volume, those by Maria Luisa Garcia-Merita and Jose Sanmartin, both members of the Invescit group.

"Garcia-Merita's short essay, "Technology and Human Nature," briefly sketches the theme of relations between technology and human nature. In so doing it points, as it were, to a general context of Invescit concern for what is called the social assessment of technology—although Garcia-Merita herself does not use this term.

"Manuel Medina, another Invescit member, in "Philosophy, Technology, and Society," undertakes a much more substantial historico-philosophical analysis of science-technology-society relations in classical antiquity in a way that throws light on our understanding of their contemporary relations today. The argument of this paper, that theory reflects both practical skills and social organization— along with an essay in an earlier volume of the Philosophy and Technology series—are closely related to Medina's *De la techné a tecnologia I: Techné y teoria: Los origenes y la epoca clasica* (Valencia: Tirant Lo Blanch, 1985).

"Ramon Queralto, who is not associated with Invescit, in "Does Technology 'Construct' Scientific Reality?" provides an alternative interpretation of the relation between theory and social practices. For Queralto, a constructive influence of technology on theory may exist, but it is more accidental than essential. [Queralto is much more traditional in his philosophical approach than the Invescit philosophers.]

"Miguel Angel Quintanilla, also not directly associated with Invescit, has written one of the most comprehensive philosophies of technology in any language. The article translated here, "The Design and Evaluation of Technologies: Some Conceptual Issues," is taken from his *Tecnologia: Un enfoque filosofico* [Technology: A Philosophical perspective] (Madrid, Spain: FUNDESCO, 1989), and highlights the centrality of design as a little analyzed aspect of modern

technology.   Related studies can be found in his articles on "ciencia" and "tecnica" in Miguel A. Quintanilla, ed., *Diccionario de filosofia contemporanea,* 3d edition (Salamanca, Spain: Sigueme, 1985). [Quintanilla is heavily indebted to Bunge, see Chapter 5 above.]

"Jose Sanmartin's two essays, along with another published in an earlier volume of Philosophy and Technology*,* provide a good general overview of the philosophy of technology of the founding president of Invescit.   In "From World3 to the Social Assessment of Technology: Remarks on Science, Technology, and Society," he takes off from Karl Popper's theory of objective knowledge to argue the need for social assessments of technology.   Then, in "Genethics: The Social Assessment of the Risks and Impacts of Genetic Engineering," he provides a specific example, a kind of case study of why and how a social assessment of technology might work.   Both papers extend ideas argued in *Los nuevos redentores* [The new redeemers] (1987) and *Tecnologia y futuro humano* [Technology and the human future] (Barcelona, Spain: Anthropos, 1990).

"Also of note, and indicative of the importance of the work of both Sanmartin and Invescit, are two special issues of the journal *Anthropos.*   The first is one devoted to the thought of Sanmartin (issue nos. 82–83, 1988).   The second is a special issue edited by members of Invescit on "Filosofia de la tecnologia: Una filosofia operativa de la tecnologia y de la ciencia" [Philosophy of technology: A practical philosophy of technology and science] (nos. 94–95, 1989), accompanied by a supplement 14, "Tecnologia, ciencia, naturaleza y sociedad" [Technology, science, nature, and society], which collects texts from Heidegger, Husserl, Scheler, Ortega, Garcia Bacca, Mumford, Ellul, Habermas, and Kropotkin, along with a comprehensive bibliography of Spanish work and translations in the field of philosophy and technology.   [Note: Medina has continued this sort of work under a new title, CIVISCIT—roughly, "citizens and the investigation of science and technology"; see web page at Prometeo 21 (Prometheus 21).]

"Although the most extensive section of this volume [on Spanish language philosophy of technology], the collection of materials from Spain nevertheless clearly falls short in at least one important respect.   It fails to include any translation from the work of Carlos Paris, one of the teachers of Sanmartin. From *Mundo tecnico y existencia autentica* [Technical world and authentic existence] (Madrid: Revista de Occidente, 1973) through *El rapto de la cultura* [The kidnapping of culture] (Madrid: Manana, 1978; 2d edition, Barcelona: Laia,

1983) to *Critica de la civilizacion nuclear* [Critique of nuclear civilization] (Madrid: Libertarias, 1984; 2d edition, 1991), Paris has advanced a sustained critical analysis of the technological world. It is unfortunate that the editor failed to pursue vigorously enough the possibility of securing a contribution from Paris."

Other European philosophers generally thought to be important but missing in these lists include the German emigre to the USA, Hans Jonas (especially *Das Prinzip Verant-wortung*, 1979 [English version, *The Principle of Responsibility*, 1981]) and Jurgen Habermas (author of many books), lamentably missing in my book because he has never associated himself in any way with SPT.

The Belgian Gilbert Hottois is included among authors above, in the Invescit book series list.

And Javier Echevarria and Eulalia Perez Sedeno of CSIC (Consejo Superior de Investigaciones Cientificas, Instituto de Filosofia) are as representative of Spain as Sanmartin, Queralto, or Quintanilla.

It may not yet be obvious from these simple listings, but the diversity of thinkers in Spain and Germany is quite wide. If one were to summarize the controversies in those two countries, however, my guess is that the range today would fairly closely track the controversies among philosophers of technology in the USA. Not listed here, but at the first international SPT conference in Bad Homburg, the thought of Heidegger was brought up to date—and shunned by German colleagues!—by Wolfgang Schirmacher.

In general, the mainstream of German thought has been similar to Johnson's collaboration with professional engineering societies (see Chapter 20 below), though Rapp and others pursue an "analytical" (originally Bungean) line, alongside Ropohl's "systems" view (with more echoes in Bunge). But it is impossible to ignore Habermas and the Frankfurt group; Jonas; and at least later Heideggerians such as Schirmacher.

In Spain, Sanmartin (originally) and Medina had definite leftist tendencies; Echevarria is decidedly centrist (somewhat like Michalos in Chapter 2 above); Quintanilla is a Bunge/"exact philosophy" advocate (though he was a Socialist Senator and his disciple Ana Cuevas Badallo—see Chapter 15 on philosophy and engineering—is anti-Bunge); and there are a number of traditionalist

philosophers of technology, including Queralto. Some mention should also be made of the existentialism of Ortega y Gasset, and maybe the general humanism of Miguel Unamuno.

Thus quadrant schemes for:

Spain: Echevarria (social democrat)

Ortega (existentialist)

Medina (Marxist influence)

Quintanilla (Bunge)

The most recent generation would be less easy to locate; for example, Cuevas, though a Quintanilla disciple, is anti-Bunge, and Lopez Cerezo is strongly influenced by STS studies.

Germany:

Huning and Lenk (professional ethics)

Schirmacher (Heideggerian)

Frankfurt/Habermas

Ropohl (systems) and Rapp (Bunge-influenced analytic)

The 1997 Karlsruhe conference proceedings, representing the current generation, are, as is the case in Spain, more diverse—though I doubt that even the most recent work, in either country, would escape the fundamental controversies reflected in the two quadrant formulations that summarize the situation here.

So Pitt, who, we will see, finds many friends among our Dutch collaborators, could still find that too much of philosophy of technology in Germany and Spain is, in his term, "ideological" rather than implementing a philosophy of science model.

 While these controversies continued to simmer within SPT, Larry Hickman, the

leading proponent of John Dewey as a philosopher of technology, became more active in the society. When Hickman became president of SPT—indeed earlier, while he was vice president and president-elect—he showed admirable pragmatic tolerance toward all our Continental collaborators, even while criticizing the writings of some of them.