SURPRISE

107 Variations on the Unexpected

Dedication and Prelude

To Raine Daston

In his essay "Of Travel," Francis Bacon recommends that diaries be used to register the things "to be seen and observed." Upon returning home, the traveler should not entirely leave the visited countries, but maintain a correspondence with those she met, and let her experience appear in discourse rather than in "apparel or gesture." Your itineraries through a vast expanse of the globe of knowledge seem to illustrate Bacon's recommendations, and have inspired many to embark on the exploration of other regions—some adjacent, some distant from the ones you began to clear. Yet not all have journeyed as well equipped as you with notebooks, nor assembled them into a trove apt to become, as Bacon put it, "a good key" to inquiry. As you begin new travels, you may add the present collection to yours, and adopt the individual booklets as amicable companions on the plane or the U-Bahn. Upon wishing you, on behalf of all its contributors, *Gute Reise!* and *Bon voyage!*, let us tell you something about its genesis and intention.

Science depends on the unexpected. Yet surprise and its role in the process of scientific knowledge-making has hitherto received little attention, let alone systematic investigation. If such a study existed, it would no doubt have been produced in your Department at the Max Planck Institute for the History of Science. The topic is a seamless match with your interest in examining ideals and practices of scientific and cultural rationality—ideals and practices often so fundamental that they appear to transcend history or are overlooked altogether. It is also an endeavor too broad and diverse for a single scholar to pursue, and you would undoubtedly have approached it by joining forces with others. Guided by a vision of collective empiricism and nurtured by the joy of collaborating, you have both researched and practiced forms of intellectual cooperation. Working groups and their edited books have become a hallmark of the Department's achievements. We have all experienced the recipe: bring together the right mixture of people and themes, in constantly fresh combinations, add a few audacious questions, and set in motion a series of unforeseen and highly productive encounters that generate unexpected findings, long-standing friendships, and a vast interdisciplinary network of like-minded scholars.

It is this network of varied sensibilities that we mobilized for a collective work on surprise and the history of knowledge, drawing on the Department's characteristic outlook and the creativity of those who have supported and shaped it over the past twenty-five years. It was impossible for us to include each and every scholar in residence during the Department's existence. In order to keep the project manageable, we had to restrict ourselves to inviting those who had been its members or guests for at least two years, or had been centrally involved in one of its working groups.

The response to our call was enthusiastic. As the papers came streaming in, we became increasingly excited. We realized that the synergies created by this project testify to the gratefulness that lives on within a vibrant scholarly community, and convey something of the intellectual and affective dispositions that sustained the life of your Department.

We envisaged a cornucopia of short texts crossing epochal and disciplinary boundaries. The contributors were asked to engage with *surprise* as a basic component of seeking, constructing, and experiencing knowledge of the world. The 107 pieces in this volume look at surprise as a historical category, as a staged performance or spontaneous reaction, or as part of a personal experience during scholarly endeavors. They mobilize different genres—from the erudite to the autobiographical, from the essayistic to the poetic and pictorial. Taken together, they engage with and build upon your work, foregrounding an epistemic category closely related to wonder.

Wonder, however, involves a paradox: it is the beginning of inquiry, but that very inquiry puts an end to it. Wonder is thus "a barometer of ignorance." The present collection of texts nuances, perhaps even contradicts, the observation that "The more we know, the less we wonder." For all those acquainted with you can attest to your permanent sense of wonder, your capacity to be surprised, and your ability to turn that emotion into productive accomplishments for the dignity and advancement of learning. Never *blasée*, you have shared the curiosity of junior and senior scholars alike, encouraging them to pursue the paths this dubious passion opens toward its apparent end. Such an attitude embodies a manner of being in the world, a

spontaneous yet reflexive confidence that the pursuit and growth of knowledge does not lead to melancholy world-weariness, but to ever-new and pleasurable sources of *admiratio*.

The result of our collective endeavor is presented here in alphabetical order by authors' last name, the texts themselves ranging, randomly, from "A Family Conversation" to "Zufallsfunde." As in the *Encyclopédie*, the arbitrariness of that order is meant to suggest the impermanence of systems and the frailty of methodical arrangements, while evoking unforeseen depths, unusual convergences, unexpected companions, and the indefinite and surprising ramifications of the ways of human understanding. The occasion seemed to lend itself less to purely erudite disquisitions than to a self-conscious epistemic and emotional exercise in friendship and gratitude. It is offered in that spirit, as a readable work to be dipped into for spells of browsing, and as a handy edition fitting in any pocket, tailored to your specific needs and practices of being on the go. May this collection be an enduring source of enjoyable surprise!

Barcelona, Berlin, London, November 2018

Mechthild Fend, Anke te Heesen, Christine von Oertzen,
Fernando Vidal

Christa Donner, *The Two-Handed Question*, 2018, collage. Based on sketches drawn during Deptartment II's colloquium in fall 2015. Courtesy of the artist.

Contents

We thank everyone at the MPIWG and elsewhere involved in this clandestine operation, and in particular Laura Selle, Kate Sturge, Urte Brauckmann, Petra Reisdorf (doppelpunkt), and Oriana Walker. We are grateful to Jürgen Renn and Dagmar Schäfer for providing the funding for this volume.

Erratum

John Carson's essay was inadvertently omitted in the printed version of this book.
It was added without page numbers to this pdf. We sincerely apologize to the author.

Impressum

Edited by:
Department II, Max Planck Institute for the History of Science, Berlin

Editors:
Mechthild Fend, Anke te Heesen, Christine von Oertzen, Fernando Vidal

Coordination and copy-editing:
Laura Selle

English-language editing:
Oriana Walker, Kate Sturge

Design:
doppelpunkt Kommunikationsdesign GmbH

Print:
Druckerei Christian und Cornelius Rüss GbR

ISBN: 978-3-00-062339-4

Printed in Germany
This publication is listed in the German National Bibliography,
Deutsche Nationalbibliothek, http://dnb.d-nb.de

A Kantian Puzzle

Thomas Sturm

Kant's 1798 *Anthropology from a Pragmatic Point of View* disturbs preconceptions about the philosopher. This book resulted from lectures he gave on the "science of man" (*Wissenschaft vom Menschen*) during the very cold Königsberg winters between 1772–1773 and 1795–1796. It is, for Kant, unusually popular in style and content and indeed attracted more students than any of his other courses. Technical philosophical terminology and argumentation are reduced to a minimum. Instead, Kant the anthropologist observes, reflects, and jokes about all things human: many human beings are unhappy since they cannot "abstract" (a young man is unable to propose to a lovely lady because he cannot ignore a spot on her face); we all play roles in society (the priest appears to be serious in public, though with his children he plays as any parent does); courtiers mimic the behavior of the rulers they wish to please, losing all individual character; if a horse had self-consciousness, we would dismount and regard it as member of society; there might be intelligent beings on other planets who are, unlike ourselves, unable to lie, always speaking their minds without any inhibition whatsoever.

Science does not escape Kant's attention either, but not science viewed from a transcendental perspective, with its a priori foundations scrutinized and systematized. Rather, under the heading of special "talents" of cognitive power, Kant looks at scientists themselves, their mental capacities and practices.[1] For instance, what mental powers must a researcher of nature possess to make a significant discovery? Mere luck cannot do the job, and neither can the "logic of the schools." Francis Bacon's *Organon* is recommended as a toolkit for making discoveries by means of experiment. But Kant also remarks that some researchers possess a special gift or "talent," namely "sagacity" (*Sagazität* or *Nachforschungsgabe*), a natural disposition that cannot be explained by rules.

Scientists in possession of this gift find paths to new knowledge as if they were guided by a divining stick (*Wünschelrute*). They can sniff out (*auswittern*) the right direction to go; they cannot teach this intuitive talent but only show it to others. As Reinhard Brandt notes

1 Immanuel Kant, *Gesammelte Schriften*, Akademieausgabe, 7:223–225.

in his 1999 work *Kommentar zu Kants Anthropologie*, the term *Sagazität* is the translation of the Greek ἀγχινοία, which contains at its root νοῦς: the faculty of intuitive insight. Other than this, little is known about the background of Kant's idea. Sagacity is so little considered that you can still write the English Wikipedia entry on it if you would like to: the term appears, but the page is blank. The German entry on *Scharfsinn* claims that *Sagazität* is just *Scharfsinn*, but when it comes to Kant and his predecessors, the topic treated is a broader one, namely "wit" (*Witz*). For Kant, *Witz* is the ability to compare, relate, and connect things that appear to be different. In *Zedler's Universal-Lexicon, Scharfsinnigkeit* is rendered as a translation not of *sagacitas* but of *perspicacitas*.

However, what interests me here is a different problem. What sagacious scientists know, and how they come to know it, must be surprising to those who do not have the power of sagacity. If you simply either have this power or you don't, if you can only display it but not teach it, then untalented others cannot but marvel at the innovative processes and products of sagacious scientists. Or perhaps they think that it is all pretence. Kant, oddly, does not enter into this issue. He simply takes for granted that some scientists possess the power, much as exceptional inventors possess what he calls "originality." However, in his lectures on logic, Kant warns against blindly trusting or following great exemplary minds.

> History of science becomes pragmatic if one simply observes how scholarship is related to human reason, progress, and the things that impede it. It has been noted that great examples retard the sciences for a while, because everyone follows the model and none strive for originality. This happened with Aristotle, Leibniz, {Des}Cartes, and Newton.[2]

When scientists focus too exclusively on "great examples" like Newton, there is the risk that they emulate these models mechanically and thus obstruct progress. A "pragmatic" history of science could help out here, since it tries to study the general conditions that

2 Kant, *Gesammelte Schriften*, Academy Edition, 24:492.

further or impede such progress. Scientists should "strive for originality": for example, they should relate things that have hitherto been treated as unrelated or invent instruments that open new paths for discovery. These claims are in line with another of Kant's famous maxims that we must learn to think for ourselves. But, if scientists can strive for originality, then it must be possible to improve one's own given disposition to originality and, consequently, also one's sagacity.

If and insofar as improvement and learning are possible, this could in turn reduce the surprise or lack of understanding that others experience when faced with the processes and products of sagacity. But this is problematic: Kant cannot have it both ways, declaring sagacity to be an immutable power that cannot be taught, while also claiming that we can intentionally improve it. Some Kant scholars—those who are trained in what Lorraine Daston has called the truly hard science, namely philology—will point out here that I used a logic lecture, produced by a student of Kant's, against a text published by Kant himself, namely the *Anthropology*. So, one might throw the problem out. Even so, it exists: still today, we tend to think of the emergence of certain discoveries as difficult to explain, because, in some cases at least, they seem to be built on tacit abilities. But we also reject the view that some products of scientific research are the result of a mysterious process that we cannot understand or teach. The puzzling topic of sagacity requires further clarification and reflection by historians and philosophers of science.

Gadi Algazi, Elena Aronova, Maria Avxentevskaya, Monika Baár, Bruno Belhoste, Etienne S. Benson, Dan Bouk, Marie-Noëlle Bourguet, Martin Brody, Joan Cadden, Mary Baine Campbell, Lino Camprubí, John Carson, Karine Chemla, John R. R. Christie, Angela N. H. Creager, Rohini Devasher, Emmanuel Didier, Matthias Dörries, Anna Echterhölter, Paul Erickson, Fa-ti Fan, Rivka Feldhay, Sebastian Felten, Mechthild Fend, Erna Fiorentini with Vincenzo Fiorentini, Markus Friedrich, Yulia Frumer, Claire Gantet, Cathy Gere, Donatella Germanese, Hannah Ginsborg, Catherine Goldstein, Michael D. Gordin, Nils Güttler, Michael Hagner, Anke te Heesen, Florence Hsia, Hansun Hsiung, Lily Huang, Myles W. Jackson, Vladimir Janković, Sonam Kachru, Judy Kaplan, Doris Kaufmann, Stefanie Klamm, Cynthia Klestinec, Charlotte Klonk, Fabian Kraemer, Katja Krause, Richard L. Kremer, B. Harun Küçük, Sachiko Kusukawa, Nicolas Langlitz, Philipp N. Lehmann, Daryn Lehoux, Rebecca Lemov, Elaine Leong, Elizabeth Lunbeck, Abigail Lustig, Christoph Lüthy, Harro Maas, Andreas Mayer, J. Andrew Mendelsohn, Minakshi Menon, Erika Lorraine Milam, Gregg Mitman, Glenn W. Most, Staffan Müller-Wille, András Németh, Christine von Oertzen, Brian W. Ogilvie, Katharine Park, Gianna Pomata, Theodore M. Porter, Jamil Ragep, Sally P. Ragep, Alisha Rankin, Joan Richards, Robert J. Richards, Daniel Rosenberg, Sophie Roux, Anne Secord, Jim Secord, David Sepkoski, Elena Serrano, Sally Shuttleworth, Otto Sibum, Skúli Sigurdsson, Pamela Smith and Xiaomeng Liu, Marianne Sommer, Emma C. Spary, Claudia Stein, Thomas Sturm, Claudia Swan, Mary Terrall, Viktoria Tkaczyk, John Tresch, Jeremy Vetter, Marga Vicedo, Fernando Vidal, Annette Vogt, Andre Wakefield, Cecelia Watson, Kelley Wilder, Benjamin Wilson, Catherine Wilson, M. Norton Wise