

陳信行 Hsin-Hsing Chen, *Kanjian bujie zhi wu: Gongye shehui zhong zhishi quanwei de wenhua shizuo* 看見不潔之物：工業社會中知識權威的文化實作 [*Bad Stuff in Your Food and Other Pressing Matters: Cultural Practices in Institutionalized Epistemic Authorities in the Industrial Society*]

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With the growing number of food safety scandals and toxic tort litigations, Chen Hsin-Hsing's book *Bad Stuff* is an important and timely contribution to the Chinese STS literature. The scope of *Bad Stuff* is ambitious, covering “pressing matters” in industrial society from adulterated food and environmental toxins to occupational hazards, which he sees as three aspects of one single issue. Published soon after a district court in Taiwan ruled against the company RCA in a collective toxic tort case brought by former employees, *Bad Stuff* is a pioneer in the Chinese language STS literature that takes on science and law as two institutionalized epistemic authorities. Having taken part in an initiative led by members of the Taiwanese STS community to assist RCA's former workers in their lawsuit, Chen also offers his observations on this court case.

Chen has dedicated a major part of *Bad Stuff* to examining how science and law—two fact-finding institutions—deal with uncertainties and with the unknown impacts of chemical substances. He compares common-law (US) and civil-law (Taiwan) traditions and finds these two systems to be different mixtures of transparency and opacity. While the public generally dislikes “black boxes,” they are often willing to leave a sterile—or untainted—space for “experts” when scientific and juridical decisions are made. Chen emphasizes the importance of visibility in political culture since the seventeenth century. Based on the seminal work of Steven Shapin and Simon Schaffer, he uses the metaphors of theater and machine to discuss cultural practices in common-law and civil-law systems, observing the theatrical attributes of common-law courts that give more weight to the perceptions of the viewing public (the jury). He finds civil-law courts formalistic and machine-like, assuming judges to exercise fine judgment based

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on reason and logic under the principle of *freie Beweiswürdigung* (free evaluation of evidence).

Chen then uses “boundary objects” and “residual categories” as analytical tools to discuss the regulation of chemicals. He sees the registry list of known chemicals as a boundary object based on which various communities can work together even when consensus is lacking. Chemical substances that do not fit into the standard form, however, fall into residual categories, many of which may be the “bad stuff” added to processed food, released into the working environment to become occupational hazards, or found in industrial waste. These residual categories problematize the old boundary object and may transform it into a new one. In the last chapter, Chen turns to food safety scandals, whose visibility has led to regulatory and legislative changes.

The book’s Chinese title, *Kanjian bujie zhi wu* (看見不潔之物, translated literally as “Seeing the Unclean/Impure”), reveals one of Chen’s main points: the (in)visibility of these pressing matters. How do we see the “bad stuff” in industrial society, both inside products and as by-products? How do scientists or courts tell if stuff is bad or what it does to individuals? How are the views of an expert weighed differently from those of lay people? Chen finds it important that these pressing matters be visible, as visibility can generate empathy with those affected, amplify the urgency of an issue, and bring about more substantial institutional reform.

Mass media, or the “tribunal of public opinion,” plays an important role in pressuring legislators and regulators to take action. Among these pressing matters, food adulteration receives the most media attention, even though its negative effects on the human body can be difficult to prove, and the compensation awarded by the courts can be minimal. Grievous mental and physical illnesses experienced by overworked employees are not uncommon. Yet, except for the spate of suicides at the Foxconn plant in China, these incidents often go unnoticed by the public and rarely count as occupational hazards.

The mass media did cover the former RCA workers’ campaign, yet coverage of the trial was minimal despite the hearing being open to the public at large. It might take greater efforts on the part of journalists to understand the nitty-gritty of legal procedure before they can truly bring courtroom scenes into public view. On the other hand, to stay objective and neutral, the court tends to remain untainted by keeping public opinion out of its sight. When disputes involve scientific uncertainty, the court may selectively admit expert witnesses and take their views into consideration. Chen explores the irony of the courtroom as an open space that nevertheless often escapes public view; he looks at why expert views are privileged and calls for opening up the black boxes of both science and law.

I find Chen’s discussion of *visibility* a bit puzzling because of the term’s multiple meanings throughout the book. When discussing science and the courts as epistemic authorities, he suggests that eyesight can be directed in certain ways, for example, using a filtering process or privileging experts’ views, all of which will convey a particular understanding of “facts.” Chen sometimes uses *visibility* to refer to the textual documentation of events or to the standardized forms and records that also help formulate a certain reality. Yet, in other places *visibility* refers to media attention, media politics, and the ability of the public to picture, relate, form opinions, or take action. Hence, Chen’s discussion of seeing and its impact takes place on multiple levels—from scientific research to all three divisions of governmental power. Yet,

due to their functions, structures, and mandates, these institutions perform differently when facing uncertainties.

As Chen acknowledges in the book's conclusion, there is no perfect certainty in science: scientists usually do not need to offer a definite answer. As Chen also notes, many actors in the legal system do not believe in the existence of one scientific truth, yet regulators and judges are often put on the spot to make decisions regardless of the status of the scientific research on the issue. Their duty demands closure in a dispute (at least a temporary one), and their hands are often tied by the law. In both the civil-law and the common-law systems, competent lawyers and judges do not generally apply rules mechanically, but they might still run up against the limit of literal interpretation or their authorized power. The legislature has the greatest latitude: even when certainty is lacking, they can still back up a decision with the popular will, which may be (in)formed through media politics. It might be true that some sort of visibility is important or specific to each institution, yet it is unclear whether Chen is proposing a more systematic understanding of the functions of these various visions/visibilities, the knowledge/reality they help to build, how they relate to democratic politics, and their impact on regulation and governance.

Chen admits that *Bad Stuff* is more descriptive than prescriptive. While acknowledging the necessity of a certain degree of opaqueness even in democratic societies that champion transparency, this book does not offer a normative suggestion regarding how much we should open these black boxes. Chen nevertheless seems to be concerned about the civil-law courts, which tend to claim that all their decisions are logically derived. He expresses a preference for the common-law courts, perhaps for their willingness to admit perceptions and hence the possibility inherent in them of recognizing messiness as part of judicial decision making, despite all efforts to maintain a sterile environment that, presumably, is more likely to generate sound and unbiased decisions.

Yet, there is a danger of making overly broad claims. First, while Chen constantly refers to civil law and common law, his examples are from the United States and Taiwan. Although there are similarities between civil-law jurisdictions and common-law jurisdictions, rules and cultural practices regarding fact-finding and expert witnesses differ from country to country and should not be overgeneralized. Second, Chen might be exaggerating the difference between Taiwanese and US courts when he calls the former machine-like and the later theater-like. While the analogy with the seventeenth-century debates between Robert Boyle and Thomas Hobbes over political and scientific philosophy is interesting and informative, it would be a stretch to apply this when comparing contemporary court systems in Taiwan and the United States.

At most, theater and machine are ideal types. Both Taiwanese and US courts contain different mixtures of mechanical and theatrical attributes, and characteristics from both sides should be treated symmetrically. It might be true that most people would not particularly enjoy a TV drama portraying a Taiwanese court hearing—such a theater might be formalistic and lacking in narrative climax, and the only audience that matters might be the judges—but, nevertheless, the different roles, the specific legal scripts, and even the costumes still demonstrate certain theatrical elements. On the other hand, while intense questioning might spark up more often in a US courtroom, it still functions as a machine: to make it run, parties must know its technicalities—having the proper standing to sue, filing the case at the court with jurisdiction, making plausible claims, following the required procedures, correctly understanding the statutes and

doctrines, and so on. An analysis that puts too much emphasis on one side will risk losing sight of other important aspects of the system. Also, the differences in cultural practices that Chen seeks to address might be more significant when comparing how theatrical and mechanical attributes are chosen and patched together in these two countries. Such work is no easy task and can be accomplished only after much more field research and empirical studies of both systems. Chen's observation of the RCA court hearings offers a start.

Overall, *Bad Stuff* is an important ground-building work for STS scholarship in both Taiwan and the Chinese-speaking world. It gives a thorough overview of the *Daubert* rule of evidence in US courts regarding the admissibility of expert testimony, and it points out the intriguing and sometimes self-contradictory interpretations of causal relations in decisions made by various Taiwanese courts. It offers thoughtful analyses of several pressing yet difficult matters we face in industrialized society, through which Chen expresses a strong aspiration for, and commitment to, STS scholarship as a source of social and institutional reform.

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