

Disaster, Memorials, and the History of Science

Scott Gabriel KNOWLES[†]

Disasters of recent memory are now passing into historical consciousness, in no small part due to memorialization. The 3.11 Fukushima “triple disaster” is one example—a beautiful memorial museum opened in 2020 in the coastal town of Futaba, and in Ishinomaki memorials are now open at both Okawa Elementary School and Kadonowaki Elementary School. Each in its way tells the story of the day with testimonies, images, and artifacts, while raising deeper questions about the ways a disaster forever alters lives and places. In this way, in the artifacts that curators choose and the emotions they evoke, memorials make history. Disaster studies scholars look to memorials as much more than places to lay flowers and “move on” from tragedy. Memorials are crucial sites of sense-making, and as such they provoke dispute, and make new political realities. In Fukushima one can easily note the attempts in some memorial sites to praise the preparedness of public officials (Kadonowaki), while at others (Okawa) the community’s pain over 74 dead children seems to have increased rather than dissipated.

Scientific content is abundant in disaster memorials. Explaining destructive events like a tsunami, an earthquake, a nuclear power plant explosion, a ferry sinking, or the identification of victims leads us very quickly into deep scientific debates. In expansive museums, and even in modest local memorials and shrines, one consistently finds researchers trying to understand what happened with forensic specificity, sometimes even decades after the disaster itself. Historians of science and technology have taken great interest in post-disaster investigations, given the social power wielded by investigators when the public’s attention is aroused to danger. From Deborah R. Coen’s analysis of “earthquake observers” and Eden Medina’s research into the complicated work of victim identification in post-Pinochet Chile, to Diane Vaughan’s canonical work on the *Challenger* explosion, historians have worked diligently to document the ways that scientific communities problematize disaster, sometimes resulting in entirely new disciplines.

This special issue of *the Korean Journal for the History of Science* seeks to bring the history of science and disaster studies together in the space of the disaster memorial. The five articles collected in this volume explore the manifold ways that the truth, memory, and politics of disasters are mediated through scientific action.

DOI: <http://dx.doi.org/10.36092/KJHS.2023.45.2.295>.

[†] KAIST Graduate School of Science and Technology Policy, sgknowles@kaist.ac.kr

Our cases are drawn from East Asia (South Korea and Japan), but the issues the authors are applicable to disasters and the history of science around the world. The aforementioned issue of victim identification—a problem common to state violence, but also to violent Earth systems disasters—frames Youngkwan Ban’s “Silencing the Sound of Cracking Bones: Victim Identification as Memorial Practice in Jeju 4.3.” Ban relates the story of victim exhumation in the project of expanding the Jeju International Airport. The 4.3 uprising and massacre is a slow disaster that started with soldiers and police targeted suspected radicals in Jeju in 1948, but the violence continues down to our own day, with thousands of families still unable to provide proper burial rites for lost loved ones. Ban’s analysis looks simultaneously at the scientific practices of retrieving DNA from “cracked bones” and the memorial practices that grow in and around these practices.

Jaehwan Hyun’s article, “Reconfiguring Disaster Victims: Mass Disaster Genetics and Memory Politics in South Korea, 1988-2000,” also considers the troubled memorial aspects of naming the dead. Disaster victim identification in Korea gets started with the founding of Korea’s National Forensic Service and its work in the aftermath of the Sampoong Department Store collapse in Seoul in 1995. A product of corrupt construction practices, Sampoong has sometimes been considered a “modernization” disaster in Korea, coming as it did in the heady days of early democratization and market development. Hyun’s analysis shows us another feature of modernization: the right for a disaster victim to be identified through genetic science, thus enabling a proper memorial. What Hyun terms “mass disaster genetics” emerges at a crucial time when human rights and human tragedy are both evolving in Korean politics. “Escaping from the Sandcastles: Risk Society, Engineers, and Social Meanings of Measurement in Korea,” by Taemin Woo, is also situated in the Korean 1990s, and considers the “history of disaster prevention technology at the Failure Prevention Research Center (FPRC) within the Korea Research Institute of Standards and Science(KRISS), a national metrology institution.” Like Hyun, Woo closely tracks the emergence of scientific institutions as a form of new-democracy-statecraft. In the end, though, these institutional activities do more than just churn out reports, they provide a material grounds for memorial practices. For Woo, “to remember disasters and reproduce them as materialized memories such as disaster prevention technologies, science and technology need to be redefined not only as technical resources for predicting, preventing, and responding to disasters but also as social constructs onto which collective memories of disasters are projected.”

In their contribution, “Beyond the Accident Republic: Making Life and Safety with Disaster Memorials in Korea,” Seulgi Lee, Heewon Kim, and Scott Knowles contribution chronicle the evolution of “memorial work” from the perspective of disaster survivors and bereaved families. In the cases of the Sampoong Department Store Collapse, the Daegu Subway Fire, and the Sewol Ferry Disaster, the authors track the manifold ways in which the bereaved argue for acknowledgment, memo-

rial spaces, and identification of their deceased loved ones. From disaster to disaster the storehouse of memorialization knowledge accrues, a terrible accumulation, resulting in a Sewol Ferry 4.16 community that demanded serious consideration as co-participants in ostensibly “scientific” practices. By the time the 4.16 families achieve their goal of a national Life and Safety Park designation in Ansan, their memorial tasks have grown well beyond memorializing a single disaster, and their practices are a blend of science, politics, and community development.

Concluding the collection is Ryuma Shineha’s highly personal and moving piece, ““What could be Spoken”: Lessons on Disaster Memories and Narratives from the Case of the Great East Japan Earthquake.” With the compound disaster of 3.11, media and government struggled to capture the nuanced and variable experiences of survivors. Shineha asks: “How have the realities of disasters been described and disseminated? And conversely, how many ‘what could be spoken’ (i.e., silent narratives) have been overlooked? What kind of perspectives and practices are required to make the various realities surrounding disasters ‘spoken’?” Shineha places in tension the official drive to preserve narratives and the slow and irregular practices of speaking practiced by survivors. Their memories became memorials, long before (and surely after) the formal memorials like those at Futaba and Ishinomaki opened to visitors.

In sum, these articles seek to explain the ways that science and memory become intertwined after disaster. When scientists become victim advocates, and bereaved families join investigative committee members, then the formerly separable worlds of grief and knowledge production are joined. By seeing this co-construction of science and memorial across multiple cases, the authors hope to expand the reach of disaster studies analysis, and make it more useful for the disasters in our midst, and those to come.