

BOOK REVIEW

“Fixing the Sky” by James R. Fleming

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This is an amazing book filled with vast amounts of information from the past and present about weather and climate modification. The book's author, with a degree in meteorology and advanced degrees in history, focuses extensively on the early years of activities addressing weather and climate modification. The book's stated purpose is to present current and historical ways of thinking about weather and climate control. It contains stories from the field's long and checkered history.

The author states he “presents a comedy of ideas extending from the mythological past to the present with common denominator being farce”. The book examines the ancient, perennial, and contemporary quests and questions by comparing recent developments (in the field) with those of the deeper past. The book is an unbelievably detailed history of weather modification concepts and efforts to alter the weather. Its dimensions made this a challenging book to review. It is quite long and greatly detailed with hundreds of stories from the 19th and 20th centuries. It contains very detailed descriptions of the concepts and techniques for weather and climate modification and the individuals involved. For example, there are many pages devoted to the early work of James Espy (1850s), Cleveland Abbe (turn of the century), Vincent Schaefer (1940s), Bernard Vonnegut (1950s), and Harry Wexler (1960s). All were prominent scientists who conceived ways to modify the weather. The work of Espy, the first widely known atmospheric scientist in the mid 19th century, is addressed in five pages of text. Espy, for example, proposed burning forests to create rainfall.

The author offers critical personal judgments of the scientific, ethical, and uncertain impacts of the various ways offered to modify the weather and engineer the climate. He often attacks without question all past efforts to alter the weather of climate. He often questions the ethical consequences of changes being considered. Most proponents of geoengineering the climate are seen as not adequately considering the impacts of the changes proposed.

The book is overly long in places but is a useful history of efforts and concepts to modify the weather. There is considerable emphasis on the early endeavors, those in the 19th century and early 20th century. The book spans 353 pages, has a small print size (~10 font), and hence is long and sometimes difficult read. The book contains 552 references.

One omission in the broad-based text relates to inadvertent weather modification caused by large cities, industrial complexes, and jet contrails. Extensive work in this topic area covered 60+ years and had much to do in the beliefs about man's capabilities to purposefully change weather and climate. Extensive investigations have shown how large cities change all local weather conditions and create clouds, rainfall, and thunderstorms over and well beyond the urban area. Also not treated are the extensive studies that assessed the various potential physical, economic, and social impacts of weather modification.

The book has some limitations, as noted above, but it serves as an excellent extensive history of beliefs and efforts to modify the weather over the past 150 years.

