1. Record Nr. UNINA9910820987403321 Autore Brush Stephen G. **Titolo** Making 20th century science: how theories became knowledge // Stephen G. Brush with Ariel Segal New York, New York: .: Oxford University Press. . 2015 Pubbl/distr/stampa ©2015 **ISBN** 0-19-026694-5 0-19-997851-4 Descrizione fisica 1 online resource (553 p.) Disciplina 509.04 509/.04 Science - Methodology - History - 20th century Soggetti Science - History - 20th century Science - Methodology - History - 19th century Science - History - 19th century Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto ""4.2 The Rise of Social Constructionism"""4.3 The Fall of Social Constructionism""; ""4.4 Postmortem""; ""4.5 Consequences for Science Studies""; ""Part Two Atoms, Molecules, and Particles""; ""5 Mendeleeva €?s Periodic Law""; ""5.1 Mendeleev and the Periodic Law""; ""5.2 Novel Predictions"": ""5.3 Mendeleeva€?s Predictions"": ""5.4 Reception By Whom?""; ""5.5 Tests of Mendeleeva€?s Predictions""; ""5.6 Before the Discovery of Gallium""; ""5.7 The Impact of Gallium and Scandium""; ""5.8 The Limited Value of Novel Predictions""; ""5.9 Implications of the Law""; ""5.10 Conclusions"" ""7.8 Reception of Neo-Newtonian Optics before 1923"" Sommario/riassunto Historically, the scientific method has been said to require proposing a theory, making a prediction of something not already known, testing the prediction, and giving up the theory (or substantially changing it) if it fails the test. A theory that leads to several successful predictions is

> more likely to be accepted than one that only explains what is already known but not understood. This process is widely treated as the conventional method of achieving scientific progress, and was used

throughout the twentieth century as the standard route to discovery and experimentation. But does science