



Rain and Resurrection

How the Talmud and Science Read the World

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About the Artwork

The artwork for the book was graciously provided by artist Eleanor Rubin, who creates prints, drawings and watercolors. Her art can also be seen in permanent collections at the Museum of Fine Arts, Boston, MA; the Boston Public Library, Boston, MA; the Institute for Research on Women and Gender, University of Michigan, Ann Arbor, MI; the Alzheimer's Association, Cambridge, MA; and on her websites: www.ellyrubin.com and ellyrubinjournal.typepad.com.



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Part I. Preamble

This introduction tells you why I wrote the book and how the book is organized. We discuss the unspoken ideology of science: individuality (Person), intervention in nature (Place), and progress (Time).

- §1 Narrator
- §2 Ideology of science
- §3 Talmudic probe
- §4 Book organization

Part II. Talmudic Texts

We begin with a few words about texts in general and proceed to an introduction to the Talmud, to the logical structure of the Hebrew language, to Jewish texts, and to translating such texts. We then interpret Talmudic texts related to three subjects that intersect with science: Person, Place and Time.

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- §6 The Talmud
- §7 Cinematic Talmud
- §8 Translating the Talmud
- §9 The Hebrew roots of interpretation and reality
- §10 Levels of Jewish text
- §11 The Yeshiva
- §12 Disclaimer

Subject One: Person

Here are some Talmud texts that explore the concept of individuality. Every human is the center of a universe and a special creation. But every individual lives within a society, a collective of individuals. Both the individual and the collective have rights and responsibilities.

- §13 Rain and resurrection
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- §15 Another's blood
- §16 Life and water
- §17 Individual name
- §18 Weaving texts

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Subject Two: Place

Place is a name of God. Place is a part of space defined by events. Place is the aspect of nature accessible to humans. We define the meaning of "holy" and discuss Talmudic texts that explore relationships between humans, nature, the supernatural, the devil and the creative urge.

- §19 Place names
- §20 Holy discrimination
- §21 Akhnai's oven
- §22 Rabbi Eliezer, Jacob of Kfar Sekhaniah and Jesus of Nazareth
- §23 In the toilet and under the bed
- §24 Constraints on power
- §25 Creative urge
- §26 The devil and the urge
- §27 Human creator
- §28 Yeshiva in Heaven

Subject Three: Time

This section is divided into four parts. Language and time sets the stage by comparing the sense of time inherent in the tense structures of Hebrew and English. Time is central to Judaism. Indeed, God's personal Hebrew name designates a type of existence in time. Varieties of time defines chronological time, natural time, historical time and existential time. Texts of time shows us Judaism's interest in existential time. Holidays of time discusses the concepts of time—historical and existential—inherent in the character of the Jewish holidays.

Language and time

The tense structure of your language affects your sense of time; language creates your world.

- §29 Hebrew time
- §30 God's personal name

Varieties of time

Time is variable; there are different ways to feel it and to measure it.

- §31 Progress
- §32 Four kinds of time
- §33 Chronological time
- §34 Natural time
- §35 Two faces of nature
- §36 Mythology: The wheel of natural time
- §37 Historical time
- §38 Existential time

Texts of time

I interpret Talmudic texts related to time, existential time in particular.

- §39 Shma: Time begins in darkness
- §40 One face of nature
- §41 Associations
- §42 Love thy neighbor
- §43 Blessings acknowledge time
- §44 Blessing time

Holidays of time

The Torah replaced the ever-cycling natural time of mythology with the progress of historical time ruled by One God. The Talmud proceeds to transform the historical message of the Biblical holidays into existential time. Existential time is the time of the individual.

- §45 Replacing nature
- §46 Sabbath cycle
- §47 Passover and significance
- §48 Telling the *Haggadah*
- §49 Narrative and narrator: Telling and hearing
- §50 Meta-(meta-text)
- §51 Shavuot: And fulfillment
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- §59 Memories
- §60 Kingship
- §61 Yom Kippur: Day of atonement
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- §63 Sukkot: Returning to time
- §64 Hanukkah: Days of light
- §65 Purim: Coming of age
- §66 Does the world make sense?
- §67 Talmudic hermeneutics

Part III. Texts of Science

This section presents the idea that science, like the Talmud, depends on skillful interpretation of a received text. The text of science is nature, and science reads and writes this text according to paradigmatic rules. We discuss interpretation, understanding, signification, meaning, communication and data. We explore the idea of free will and compare the interpretation of meaning done by systems of cells with that done by collectives of people.

Interpretation

Understanding

Understanding involves metaphor, prediction and know-how. To understand a thing is to be proficient in interacting with it. Understanding causality, complexity and free will challenges both science and the Talmud.

- §69 Understanding by metaphor
- §70 Prediction and understanding
- §71 Utility and understanding
- §72 Understanding causes
- §73 Emergence of free will

Signification

Science uses the controlled experiment, an artificial slice of nature, to study nature as she really is. This strategy of signification is not unlike the art of the cinema.

- §74 Signification in science
- §75 Cinematic science

Meaning

We define meaning as emerging from a process of interaction. We discuss how science tests, validates and up-dates the meaning of scientific information and scientific paradigms. Interpretation is essential to the evaluation of meaning. Biological systems create meaning through democratic process.

- §76 Types of meaning
- §77 Meaning for science
- §78 Validation of meaning
- §79 Biological interpretation of meaning:
 - Co-responsibility
- §80 Power of pluralism
- §81 Paradigms
- §82 Tests of truth

Communication

Texts are central to the scientific enterprise.

- §83 Communications of science

Data

Science generates data, enduring information about the facts of nature. But a fact of nature will not become accepted as part of the database unless the fact is noticed, interpreted and communicated by prepared minds.

- §84 Database
- §85 Creating the database

Part IV. Postamble

This book has connected Talmudic texts with ideas related to science. In closing, we consider some agreements and some conflicts between the two systems of thought—religious and scientific.

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- §87 Science in action
- §88 Talmud in action
- §89 Creation
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- Blessing
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- Atonement
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