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- X. , 2020
- XI. , 2016
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I

Stochastic thinking in the Bible and the Talmud
Annals of Science, vol. 55, 1998, pp. 185 – 198

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1.1.

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... T/Avoth ...
Avoth.
... (1135 – 1204).
... (... , 1990-
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Oxford Annotated Bible (1985).
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Le Talmud de Jérusalem, tt. 1 – 6. Paris, 1960,
(... 1 – 6. ... , 1899 – 1904,
; ... ,
, 2010 .)

1.2.

... (... - ... -
, 1988).
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ben Chisma (T/Avoth 3¹⁸)

Elieser

(*after-course*)

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14:28

35,

12:33

XVII .

XVIII .

.5.5².

1.3.

(1967),

Rabinovitch (1973),

Hasofer

(1974)

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Ineichen (1996)

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b.

(, .5, , 1025).

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() 199b; () 767b, .4, III).

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1907 . (1896/1912,
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(.11) 1999 .):

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(1618 – 1621/1952, .16, .932)
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[...],

(.77 *Milhamot haShem* III-4) ,
(1896/1912, . 1999 ., .9):

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“ ”, “ ”.
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(. 5.1).

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“ ” (1:6).

“ 20:1). ”(

“ ”(22:34 18:33).

[...], ”(9:11).

3.

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1/2 (Poisson 1837, . 47).

()

(2019, § 9.1)

6¹) (. 44 “ Makhshirin 2³⁻¹¹ ”

T “ ”.

(Ketubot 1¹⁰;

Makhshirin 2⁹; , . 45)

9 [,], -

[, -],

(0,1).

4.

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(1837, . 140 – 141; 2019, § 9.2),

XVIII . ,

(1995, . 7.1).

(1745/1756, . 2, . 109 120 – 121).

(), “ ”
(1751/1756, . 146),
“ ” “ ”
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(. 74 Sefer haMitzvot,
290), , “ ”
(contingent) ,
[?] ,
” . ,
(1977, . 124) ,
“ , (not of
accident), ”.

21:29:

1654 .

(-
) , (. 164
Mishna Torah, Edut [?] xxi-1),

1000 , “ 100 [10 ”] ,
100 – , 10 ”.

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(1977, . 206 – 209).

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d) () (9:24 21:17 – 18)

” “ „4

5.1.2. (. 87, 90 84).

) ” 500 (1500)
3 (9) (Taanit 3⁴).

b) (Sabbath 6²).

) (/Eiruvim 10¹).

. 5.3,
“ ”, = 1/2 (. . 3),
= 1/8, . . . 1/8,

5.1.

d) (Leviticus 6:3–10).

40 “ ” (/Yoma 4¹).

) (3:44 – 49)
273- “

” (), 1⁴)⁵.
“ ” 22 000 273

“5 ” []. 22 273,

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. 5.1.4. ?

5.1.3. ,

() ,
(, .91 *Responsa*)
:“ , ?
[...]

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(Horayot 1¹; .
, .38), “ ”
:“ ”.
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(/Yevamot 11⁶) 7.
(/Makhshirin
2⁷). ,
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(1713/1986, .27) , “
, ”,
“] ”⁸.
(1963, II-23, . , .138) ,

() . (, Terumot)
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(,) ,
(.41 *Mishna Tora*,
XV) ,
“ ”. :

, $\frac{1}{100}$
 $\frac{1}{101}$.
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 , (1765/1936, .2, .16).
 (.40),
 Shlomo ben Adret,
 .5, (1235 – 1310).
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 [.?], [] , – ,
 “ .?], [?]”.
 (.39),
 , () .
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 ben Adret , , Shlomo
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5.3. : ?
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 (.5.2).
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 ((0, 1, 2 3)
 (. b),) $\frac{1}{8}$,
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 707), Meir (, .3, .
 (.4).
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 , (1669), –

(Avoth 2¹)

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5.4.

(*Problemata* 951b)

(1713/1986, . 31)

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0,99 0,999.

(1977, . 124),

(. 111),

(*Yevamot* 10)

(*Lexikon* 1987, . 4, 2-

Verschollenheit, . 1199):

5.2,

5.5.

(3¹⁵⁻¹⁶; . 120) (. . 5.2)
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(1687/1936, . 662): “

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(1975, . 123)
: “ ”
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“ ” (. .)
1 (1687/1936, . 502): “

6.1.

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(2019, § 2.1.4).
(Price 1955, . 6) “

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[] “ ” (/Eiruvim 5⁴)

(/Kelim 14³).

Shimon,
0,75%.
20 , 0,14%¹⁰.
(1974)

Shimon
Joinville (XIII .)

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6.2. (/Kelim 17⁶), . . .

2.2.4). (2019, .

7. (11.

(. 2);
(. 5.1);
(. 5.2 – 5.3).

119). (1974, . 117 –

(. 108). (. 112, . 68),

(. 2)

(. 5.1),

(. 5.2)

(. 5.4 – 5.5).

.5.2),

(.5.1.2) ,
(.5.3).

(.3

(.5.1.1),

1. (1977, .122)
“ ”: “ []
(wisdom in the sight of the people),

2.
(, 1995) 88:37. (.iii)
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(13: 17 – 20).

[...] , [] ,
? [...] . [...].

3. (.xi) (Encyclopaedia 1962, .920 – 921)
“ ” (:
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4. (/Avoth 4¹⁵), : “ Jannai , ”.

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6. 1960-
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(Shafer (1978).

9. : “ , ; , []
(urgent)”.

10. 1960-

11. , , ,
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(1887, . 1, . 246 – 247).

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(1887, .1, .241 – 242).

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. 232.

(.1, .44),

1791 .

.264.

C.293 – 296 307.

1980-

(.2, .415):

1948 – 1953

.305.

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.347

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.382.

(.385)

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(.386)

240),

(, 3- , .28, 1978,

.16, .399 - 401.

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.335.

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(.334)

22:21).

(13:2, 22:3).

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.177.

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(.2, .397):

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(.70-86)

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(.108):

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(.1, .177) : XIX .

(.178 , -
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(.2, .17):

(.2, .91):

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(1911 – 1913),

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(.2, .17

1877 .. .3, .83 1929 .):

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22:21):

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(.106).

(.107)

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(.2, .

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 1880 – 1881 ., .451):
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(. 92)
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(2009).
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(II ,), 1787 .,
XIX .
(1823/1827, . 155),
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(.16, .137): -
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16, .144).
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12:30, 11:23). - (,
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slaughter (, *slaughterhouse* –)).

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1795 .
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(1912 1987, 1907 . , . 4;
1999, . 11): ,

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(, . 8; *Phys.* 199b1; *De
generatione anim.* 767b5)
“ ”,

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“ (, . 12; *De Caelo* 283b1) ,
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(Lamarck 1815, . 133),

“ ”. (p. 173) ,

(an 8 (1800), . 76)

“ (1810 – 1814/1959, . 632), “ ”.

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(Harvey 1651/1952, . 338) :

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1718 .

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(De Moivre 1756, . 252 – 253).

(1912/1987, . 10; 1999, . 15).

“ ” (, . 1/9)

1954, § 5: (Newton 1704/1782, Query 31;

[] (Laplace 1776/1891, . 152; 1814/1999, . 837),

(1814/1999, . 835) (Maupertuis 1756, p. 300; Boscovich 1758/1966, § 385).

1812/1886, . 361):

“ (1596/1963, .18, .111): ”

.17, .108, “ ”:
“ [...] , ”

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1621 .

(.3 7 .18, .117 118):

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- , ’ [...] .
[...] ([...] (.5
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.9- .5- (1619/1997, .
451): “ ”:

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(1618 – 1621), ’ ,

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.38, .404 – 405) : (1609/1992,

[...] , , [...] (, [])

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“ ” (. .) ,

(1947, . 67 – 68).

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(Fourier 1829, . 379)

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(1873/1969, . 360):

[...]

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(D. Ross, *Works*, vols 1 – 12. , 1908 – 1954).
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1712 – 1713 .

1662 1812 .

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“ 1. 350 „2, (1620 – 1674)

XVII .,

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$$y = 1 - F(x), 0 \leq x \leq 100$$

$F(x)$

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 (m – f) .
 David & Edwards¹¹ , Shoesmith⁹, Hald¹⁰
 , Freudenthal¹²

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 3. (1654 – 1705)
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4. (1667 – 1754)
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Kohli²⁹

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S, G, 10.
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- 1796
- ³⁶ ?

VII

, 1, 2014, . 136 – 158

XIX

(1809)

1.

() (1761, . 187).

(1752,)

. 2, . 496) 1742 . (Fuss 1843/1968,

(, .)?
(1814/1999, . 848),

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... ...?
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(, A. L. Schlözer 1804, . 63).
(1922 /1960, . 416):

(Achenwall 1752/1756,)

(1804, . 86)

(1839, . 48)

Knies (1850, . 24)

1806 1807

(§ 3)

(13:17 – 20):

(Anchersen 1741)

(1752,)

(Knies 1850, . 23).

1734 . . .

1831 . (

1990, . 65 – 66).

(1804, . 41 90)

(?), , ,

(Fourier 1821 – 1829).

XIX .

2. . . (1809)

(.57),

(.39 50 – 54)

(.35),

(.19 – 20)

(.52),

(.48).

(Quetelet 1846, .275),

(.35),

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(1804),

(1839, .2)

(. . .),
(.1)

(.102)

(Lueder 1817).

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(. IX). ,

(. 37):

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(. 37),

(. 105). . . .

(1804):

(. 52),

(. 51).

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(1804, . 44),

(. 58),

(. 85 – 86).

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(1910, . 27)

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(1809, . 3)

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XIX .,

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 (1804, . 32), ()
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 (, 58, 2000)
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2. (rationi consentaneus, welches Maß ... vereinbar ist)
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14. (mutentur, wandeln)
15. (?)
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- 25.
26. (agri, Acker)

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(commode, angemessen)

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Verhältnis)

35.

(agrorum, Acker),

36.

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38.

(pecuniae numeratae, numeriertem Geld)

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(flotae, flößen, Flöße, flößen),

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51.

(spe metallorum, in der

Hoffnung auf Metalle).

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(pretiosi, kostbaren)

56.

. Calendaria,

Kalenderangelegenheiten. (

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... , 6, ..., 8, ...
(48),
(54 48).
(34 , 44 51).

(Woolhouse 1873, p. 40).

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(Delambre 1819, . LXVII)

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(§ 2,),

(Woolhouse 1873, .

39).

(Wagner 1867, p. 423)

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pp. 870 – 871)

(Zahn 1926,

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(Gattungsleben).

(. § 1)

∴ (1804, . 11),

(1850)

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. Butte (1808)

(1804, . 58)

(§ 2)

(1843, § 105)

(1905/1960, . 43 – 44)

(1909/1959, . 20)

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37), . Woolhouse (1873, p.

(), . Haushofer
(1872, . 107 – 108)

(Knapp 1872, . 116 –
117)

. Maciejewski (1911, . 96)

(1917, . 56 – 57):

(1961, . 127)

(1905; 1906),

1909 .,
, Wolff (1913, . 31)

(1922)

Lueder (1812, . 9)

(1774 – 1831),

. . . , . Hugelmann (1890). 22
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(1827),
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(1809), . § 2,

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2. Schlözer (1804, . 91):

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singularum rerum pondus etc. [?],

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Leipz. lit. Z., Jahrgang 1825

Göttingische gelehrte Anzeigen . [

8. Niemeyer's Pädagogik
Zeitgenossen.
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Niemeyer (1796); 7 8
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(1804, . 86)

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[. . . (1732 – 1806),].

211, 212, 222, 263, 271, 273, 275 306.

(1772) 60

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Göttingische gelehrte Anzeigen 1808

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[3, . 190 274]
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[4, . 224]

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[7, . 1].
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[11, .188].
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[18, .11].

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[19]. . . .

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“ (§ 2.3),
“ (: ”).
“ ” [27, .168]⁵.

[27, .153]. ()⁶,
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1931]⁷.
2.3. , , ,
[32, .234]
(, [33, .11 – 16])
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[34, .36]. “ . . .
” [,] [30, 1930, .4].
[35, .280]
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“ ” [41, .314]¹².

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[39, .120]. [44, .

113]

XIX . [45, .29 – 31]

(. . . , 1831; . . . ,

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“ ” [9, .54;

“ ” [46, .42],

[48, .118 – 120].

[49, .105 – 106].

(§ 4.1).

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“ ” [50, . 128 – 130].

“ ” [51].

1933 .. [52; 53].

1936 .. [54].

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– 172 !

. § 2.3, [39, . 117]

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“ [...” [55, . 98].

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(1932 .)
“ - ” [58. .
81 – 82]¹⁶. [35,
. 282]; ， ， ： .
“ ” [39, . 118], .
“ ”
[40, . 16].
1930 . 1948 . [13, . 9
– 10].
1930 – 1948 .
“ ’ ， … ” (. ’)，
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[15, . 67].
4.
4.1. . 1954 .
[59], . [6],
1952 – 1954 .
“ (. 44), . .
(. 41)¹⁷. ， ，
/ : “
” (. . ， . 41);
(. . ， . 61),
(. . ， . 74);

“ (. . . , .46).

“ [:“] :“ ”. : . : , “ „18 .

, XVIII .(. .) (. § 2.3) , -

“ ” [13, . 13] [?] [61, . 162]. [1969 .] [33, . 9]. :

- [!]

(. 87)¹⁹.

[15, . 69]²⁰, “ ” , ,

4.2. [64, . 20].

... “ ”. “ ” [59, . 47], . § 5.1.

“ - ”,

()²¹.

[65], . . ,

4.3.

... § 4.1²².
“ ” [68, . 71], “ ”
“(. . .)”
[69, . 75]²³.
[70, . 43; 59, . 69; 33, . 11].

... [71], 1957
:“ ... ”
[20, . 297].

“ ” [72, . 16]
“(. 194).
“ ” [73, . 117].
“ ”

5.1.

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1920 (§ 4.2),
1929 – 1933 [27, . 145 – 146]
 (§ 2.2) 1923 . 20
1910 – 1911 “
[!]” “
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[25]²⁴.] ” [74, .26

5.2.

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(.55),

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[78, .8],

1960 . [79; 80].

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[82]²⁶.

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(§1.3); ,

(§ 2.3)
[83].

(. § 4.1)

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“ “ ” . . [84, . 60].

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[85, . 294].

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1935 . “ ” [86, . 5],
1939 . , 1948 .
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