

## Founding Mothers of Jewish Communities: Geographically Separated Jewish Groups Were Independently Founded by Very Few Female Ancestors

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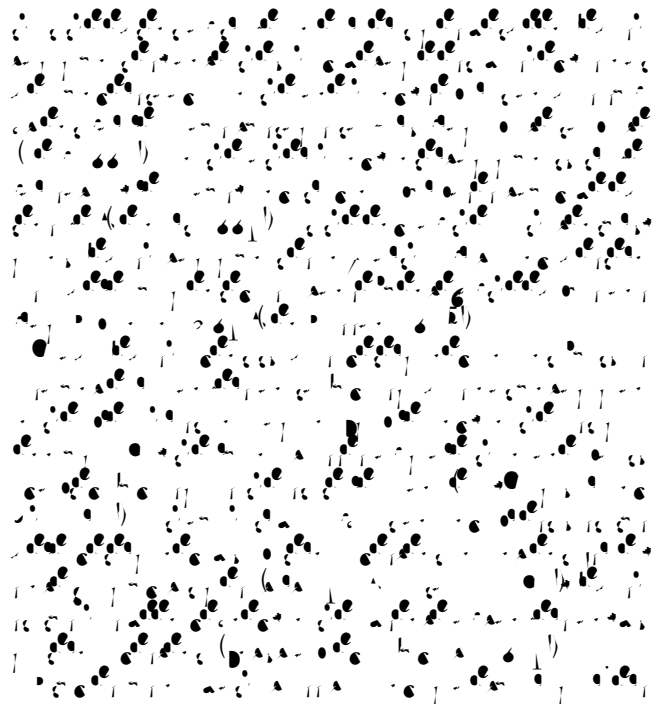
5,6founding of the modern state of Israel (1948), there were many long-standing separate Jewish communities in Europe, North Africa, and Asia. All of them claimed an origin in one or another dispersal from Israel and Judea. However, the origins of small minority communities founded before the 16th century are rarely well documented. For some Jews (e.g., the Babylonian Jews and modern Iraqi Jews), evidence exists of ancient Jewish communities in the same locations as in present times, but gaps often exist in the records of intervening centuries (Rejwan 1985, p. 143). In no case is there clear evidence of unbroken genetic continuity from early dispersal events to the present (de Lange 1984, p. 15; Encyclopaedia Judaica 1972).

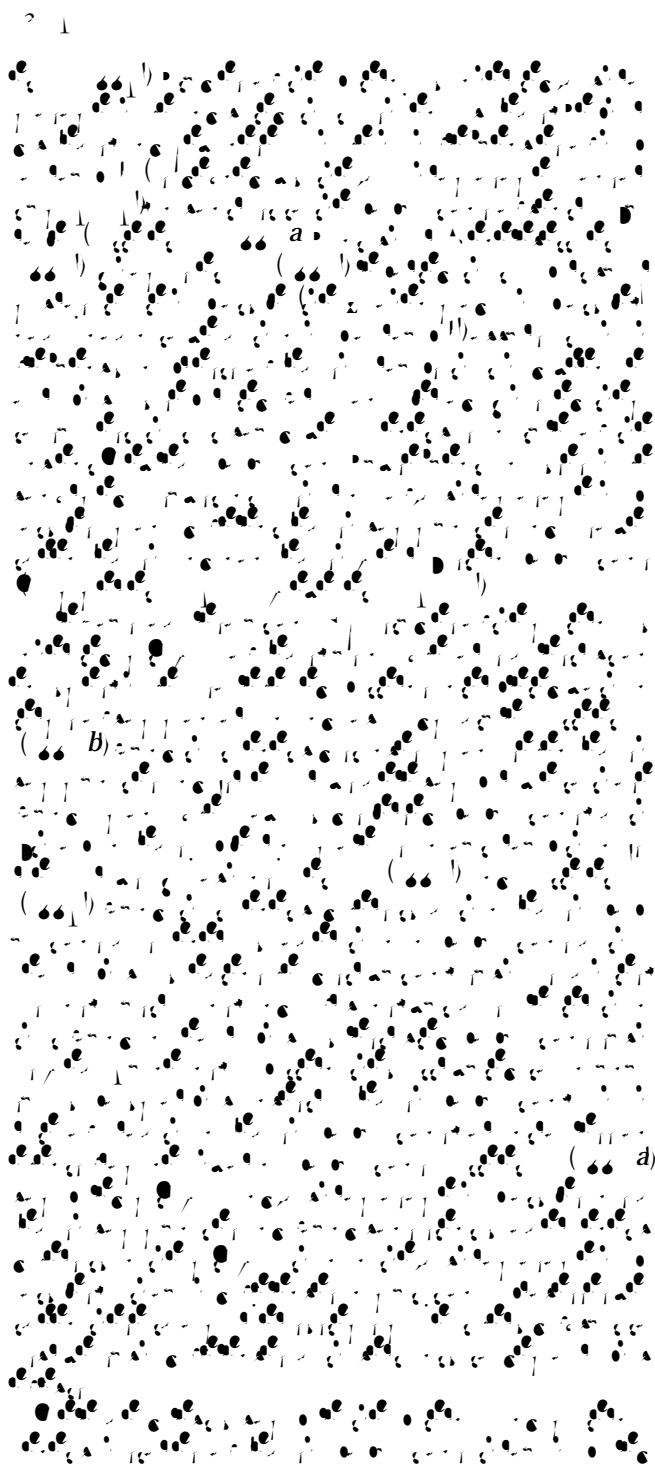
A further difficulty in reconstructing past events is

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This image shows a page of musical notation, likely a score for a string instrument. The notation is extremely dense, consisting of many staves filled with notes, rests, and other musical symbols. The notes are small and closely spaced, creating a complex visual texture. Several markings are visible, including the word "Taq" (likely indicating a specific rhythmic value or technique) and the Greek letter "mu" ( $\mu$ ), which often denotes a microtonal interval or a specific performance instruction. The notation is arranged in a vertical column, with the staves overlapping and filling most of the page area.

**Table 1**

**Y Chromosome Diversity within 18 Jewish and Non-Jewish Populations**

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! b r • • c • • k

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**Table 2**

**mtDNA Diversity within 18 Jewish and Non-Jewish Populations**

Population	n	h (s.d.)	Population	n	h (s.d.)

**Table 3**

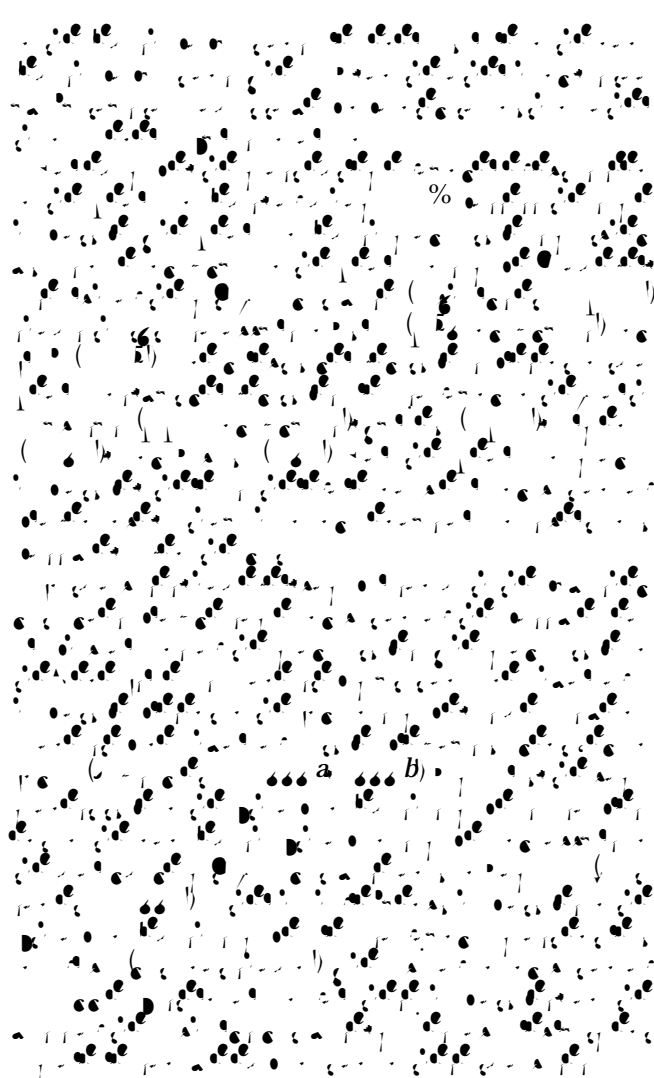
**Frequently Encountered mtDNA Haplotypes**

Haplotype	Frequency (%)
(1)	1
(2)	1
(3)	1
(4)	1
(5)	1
(6)	1
(7)	1
(8)	1
(9)	1
(10)	1
(11)	1
(12)	1
(13)	1
(14)	1
(15)	1
(16)	1
(17)	1
(18)	1
(19)	1
(20)	1
(21)	1
(22)	1
(23)	1
(24)	1
(25)	1
(26)	1
(27)	1
(28)	1
(29)	1
(30)	1
(31)	1
(32)	1
(33)	1
(34)	1
(35)	1
(36)	1
(37)	1
(38)	1
(39)	1
(40)	1
(41)	1
(42)	1
(43)	1
(44)	1
(45)	1
(46)	1
(47)	1
(48)	1
(49)	1
(50)	1
(51)	1
(52)	1
(53)	1
(54)	1
(55)	1
(56)	1
(57)	1
(58)	1
(59)	1
(60)	1
(61)	1
(62)	1
(63)	1
(64)	1
(65)	1
(66)	1
(67)	1
(68)	1
(69)	1
(70)	1
(71)	1
(72)	1
(73)	1
(74)	1
(75)	1
(76)	1
(77)	1
(78)	1
(79)	1
(80)	1
(81)	1
(82)	1
(83)	1
(84)	1
(85)	1
(86)	1
(87)	1
(88)	1
(89)	1
(90)	1
(91)	1
(92)	1
(93)	1
(94)	1
(95)	1
(96)	1
(97)	1
(98)	1
(99)	1
(100)	1

**Table 4**  
Mean  $F_{ST}$  Values in mtDNA and Y Chromosome Data

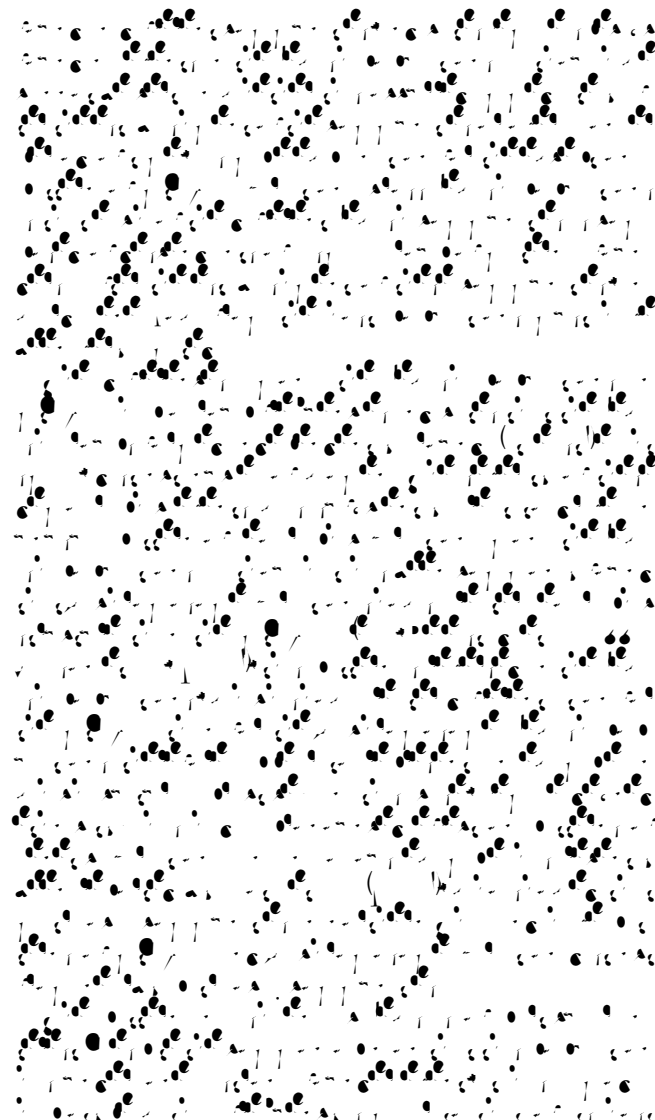
	$F_{ST}$	
mtDNA	0.000	0.000
Y Chromosome	0.000	0.000

( $P < 0.001$ ) = ...



**Discussion**

...



**Table 5**  
Comparison of X Chromosome LD among Georgian Jews and non-Jewish British Men

	$\leq$	$\leq$	$\leq$	$\leq$	$\leq$
$P \leq$	1				
$P \leq$	1	1			
$P \leq$	1	1	1		
$P \leq$	1	1	1	1	
$P \leq$	1	1	1	1	1

...





The image shows a musical score with several staves of music. The notation includes notes, rests, and various symbols. There are several annotations in parentheses, such as  $(b)$ ,  $(\dots)$ , and  $(\dots)$ . The score is dense with musical notation, including stems, beams, and note heads. The overall appearance is that of a complex musical composition or a technical exercise.

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