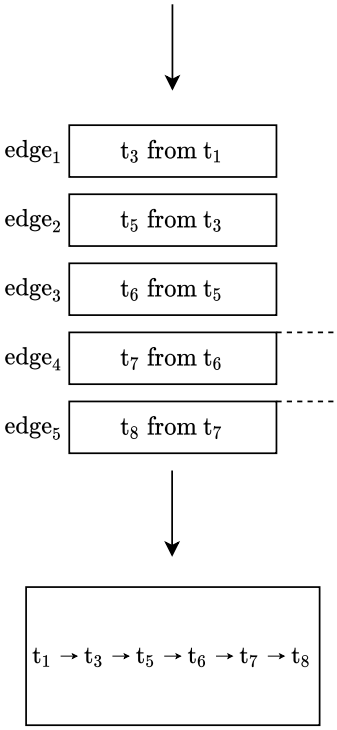
Inner vs Inter City Movement

1 Hadith to Edges

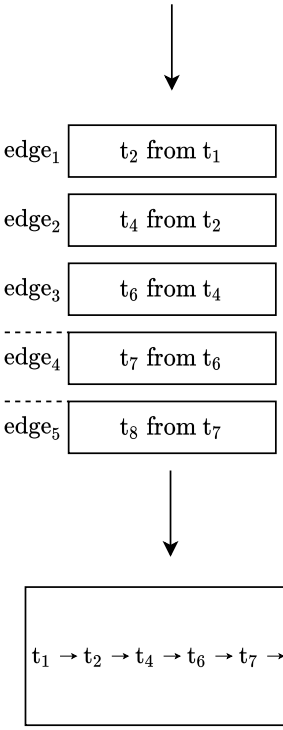
Hadith – 1

Bukhārī (id: t_8) writes: ʿUbaydallāh b. Musā (id: t_7) narrated to us, saying: Ḥanẓala b. Abī Sufyān (id: t_6) reported to us about ʿIkrima b. Khālid (id: t_5): about Ibn ʿUmar (id: t_3), may God be pleased with them both, that he said that the Prophet (id: t_1), peace and blessings be upon him, said: "Islam is built on five things: testifying that there is no god but God and that Muhammad is the messenger of God, establishing daily prayer, giving the charity tax, the pilgrimage, and fasting in Ramaḍān."



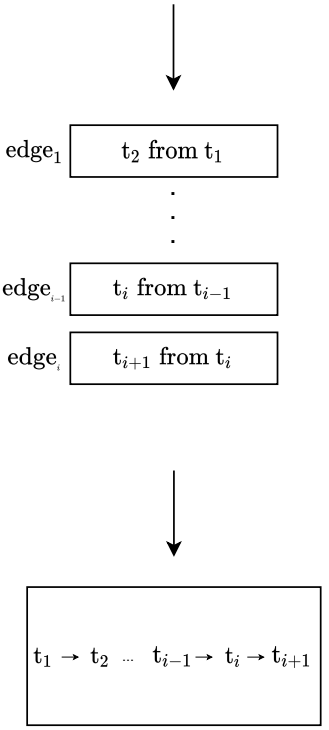
Hadith – 2

Bukhārī (id: t_8) writes: Ubaydallāh b. Musā (id: t_7) narrated to us, saying: Ḥanẓala b. Abī Sufyān (id: t_6) reported to us about al-Qāsim b. Muḥammad (id: t_4) about ʿĀʾisha (id: t_2), may God be pleased with her, that she said: "the Prophet (id: t_1), peace and blessings be upon him, used to pray thirteen cycles during the night, including the witr and dawn prayers."

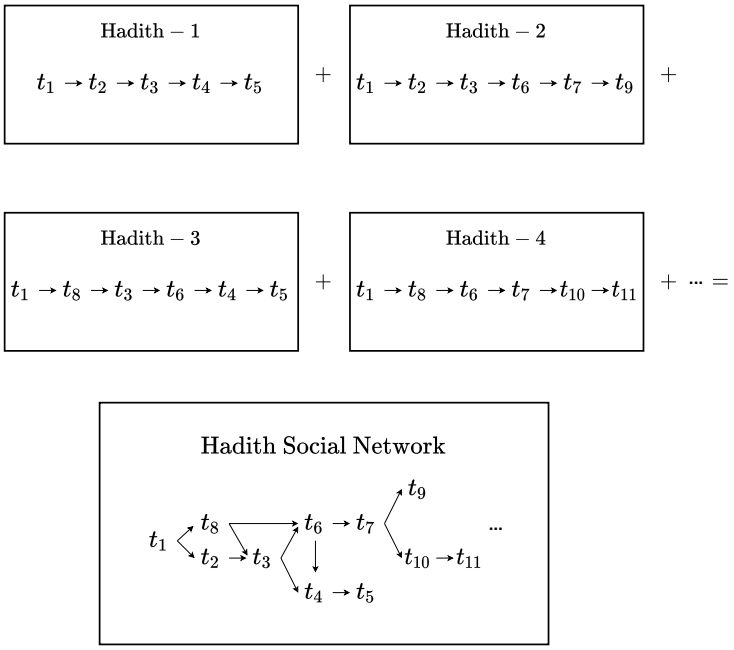


Hadith – α

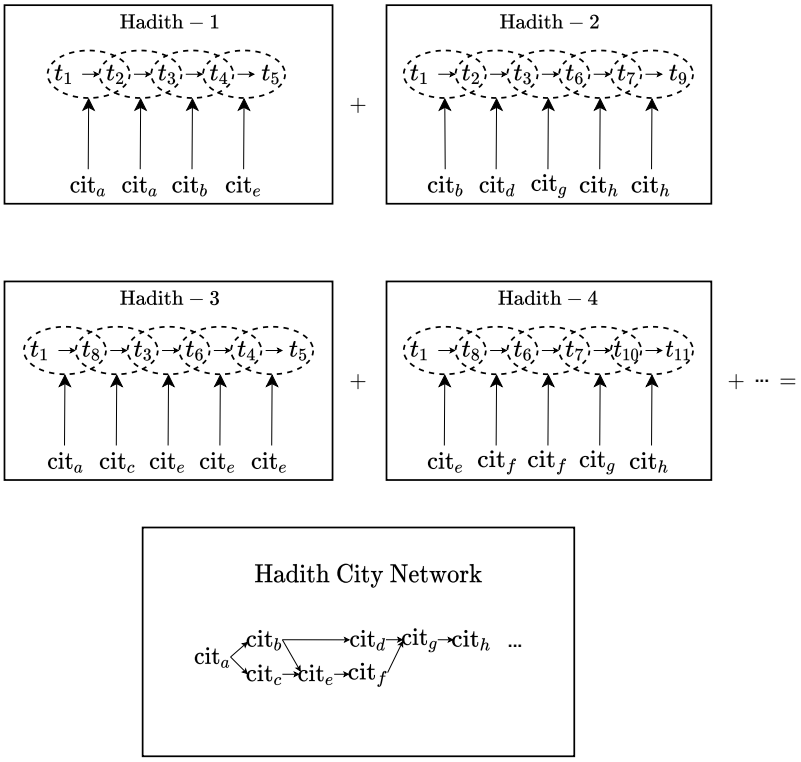
[final transmitter (id: t_{i+1})] [mode of transmission] [intermediary transmitter (id: t_i)] [mode of transmission] [intermediary transmitter (id: t_{i-1})] ... [intermediary transmitter (id: t_2)] [mode of transmission] [initial transmitter (id: t_1)] [matn (content)]



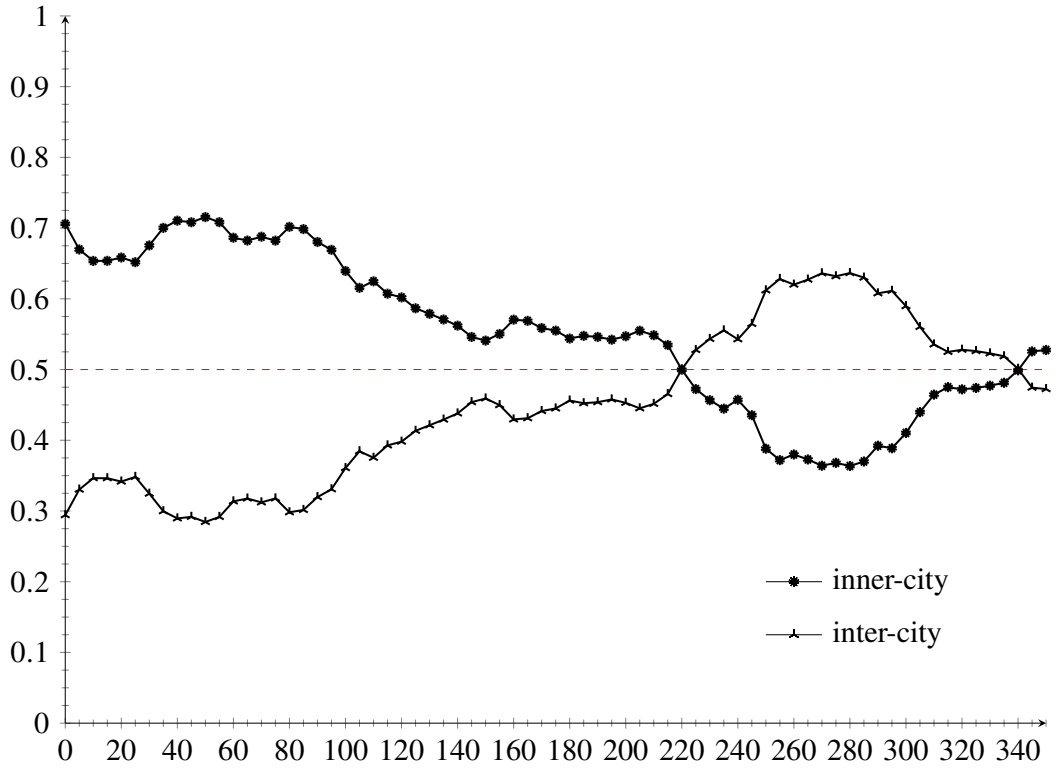
2 Edges to HSN



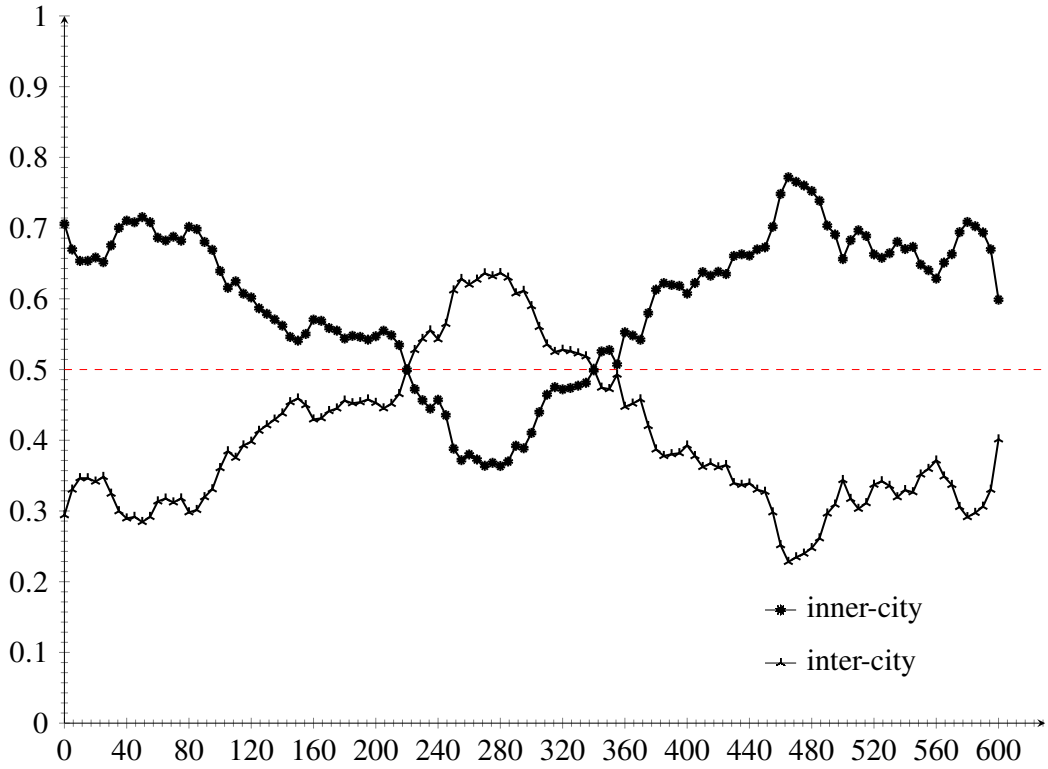
3 Edges to City Network



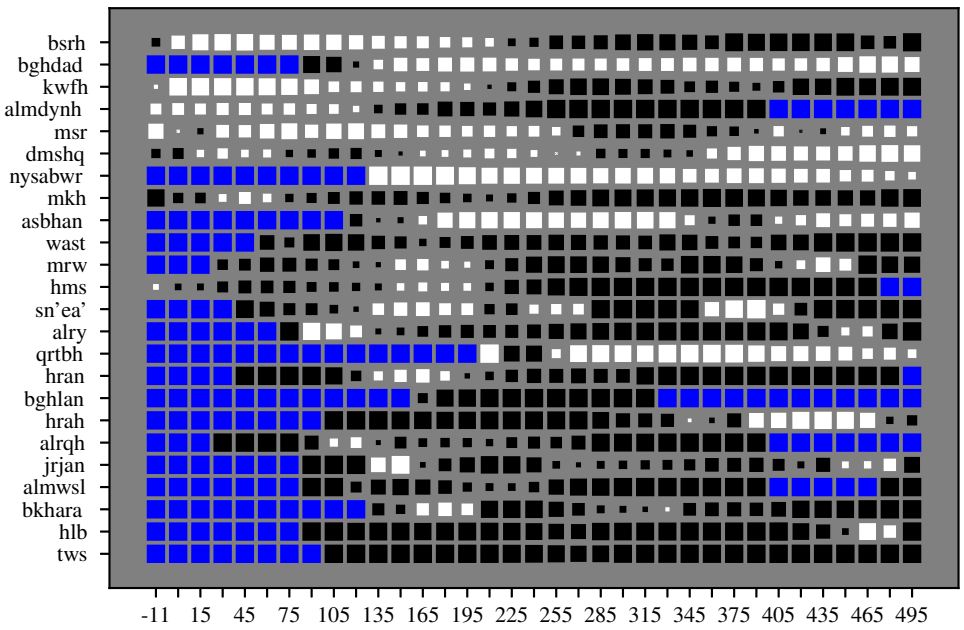
4 Bird's-eye View First 400 Years



5 Bird's-eye View First 630 Years



6 City Analysis



7 Transmitter Analysis (Inner)

year span		transmitter	inner	inter	ratio	transmitter	inner	inter	ratio
-11	0	4049	2543	1	0.9996	3436	8849	4574	0.6592
0	15	4945	260	2	0.9924	4945	260	2	0.9924
15	30	5913	913	2	0.9978	5913	913	2	0.9978
30	45	5543	246	2	0.9919	5722	1021	777	0.568
45	60	4049	2543	1	0.9996	4396	5949	5	0.9992
60	75	4980	770	1	0.9987	4967	3666	728	0.8343
75	90	2069	2817	6	0.9978	2069	2817	6	0.9978
90	105	5739	659	5	0.9922	4903	1838	23	0.9875
105	120	7863	3500	18	0.9946	6458	3536	798	0.8159
120	135	6399	145	1	0.9932	7272	5028	3124	0.6168
135	150	6712	396	3	0.9925	3629	6212	1712	0.7839
150	165	7133	279	2	0.9928	3436	8849	4574	0.6592
165	180	6437	288	3	0.9877	2492	8146	2341	0.7768
180	195	4553	578	2	0.9954	6904	3376	68	0.9802
195	210	4244	295	1	0.9966	8160	6936	2107	0.7669
210	225	5938	360	1	0.9952	4533	6446	4937	0.5663
225	240	5435	594	1	0.9983	5049	6820	9637	0.4144
240	255	5219	129	1	0.9923	6879	6411	132	0.9797
255	270	12613	631	1	0.9968	8613	2244	122	0.9481
270	285	17654	119	1	0.9905	12383	1437	429	0.7699
285	300	34407	105	1	0.9906	11603	1776	1419	0.5558
300	315	11548	230	1	0.9957	10025	2991	8095	0.2699
315	330	10596	476	1	0.9979	23051	2507	639	0.7967
330	345	10437	182	3	0.9838	27677	650	36	0.9468
345	360	22973	154	1	0.992	28131	1515	24	0.9842
360	375	26320	547	2	0.996	8994	3976	40	0.9899
375	390	22975	574	2	0.9953	24549	825	586	0.5846
390	405	18175	529	1	0.9977	26123	781	9	0.9876
405	420	41612	81	1	0.9878	13204	806	12	0.9851
420	435	46431	91	1	0.9892	14773	744	51	0.9355
435	450	29523	148	1	0.9933	28387	207	10	0.9513
450	465	10610	210	1	0.9951	29539	494	4	0.99
465	480	46135	351	1	0.9972	21277	909	250	0.7844
480	495	9601	312	3	0.9896	24779	528	37	0.9335
495	510	46384	95	1	0.9896	27317	326	10	0.9699

8 Transmitter Analysis (Inter)

year span		transmitter	inner	inter	ratio	transmitter	inner	inter	ratio
-11	0	30371	1	770	0.9987	3795	6261	14005	0.691
0	15	6618	1	3	0.75	6618	1	3	0.75
15	30	322	1	27	0.9643	7547	109	179	0.6212
30	45	3476	1	184	0.9946	5079	122	1750	0.9344
45	60	5672	1	304	0.9967	5021	2	485	0.9944
60	75	6259	1	81	0.9878	4883	2750	2805	0.5049
75	90	4622	1	127	0.9922	3929	14	780	0.9824
90	105	720	7	220	0.9692	2840	562	605	0.5184
105	120	4002	4	276	0.9858	5625	1261	1065	0.4579
120	135	4612	1	142	0.993	7272	5028	3124	0.3832
135	150	2622	1	125	0.9921	3629	6212	1712	0.2161
150	165	8621	1	101	0.9902	3795	6261	14005	0.691
165	180	2201	1	165	0.994	2492	8146	2341	0.2232
180	195	2450	1	127	0.9922	4716	187	3066	0.9425
195	210	3741	3	591	0.9944	3443	4479	13680	0.7533
210	225	1326	1	172	0.9942	4533	6446	4937	0.4337
225	240	3840	1	469	0.9979	5049	6820	9637	0.5856
240	255	5390	1	353	0.9972	488	4562	12010	0.7247
255	270	448	1	253	0.9961	6817	681	3245	0.8265
270	285	30371	1	770	0.9987	3567	1137	1376	0.5474
285	300	9844	1	418	0.9976	24433	29	3344	0.9911
300	315	25528	1	365	0.9973	10025	2991	8095	0.7301
315	330	9869	1	113	0.9912	22334	55	798	0.9346
330	345	30623	1	223	0.9955	10289	110	1262	0.9192
345	360	9866	1	728	0.9986	31063	425	3392	0.8886
360	375	28652	1	33	0.9712	22989	947	1388	0.5943
375	390	17165	3	85	0.9624	28230	192	1469	0.8842
390	405	16463	3	302	0.9897	28679	83	529	0.8638
405	420	27629	6	748	0.9908	27629	6	748	0.9908
420	435	41400	1	90	0.9891	9927	153	946	0.8603
435	450	14991	1	309	0.9968	14991	1	309	0.9968
450	465	11867	1	310	0.9968	10034	491	538	0.5228
465	480	62375	1	176	0.9944	21277	909	250	0.2156
480	495	46105	1	22	0.9582	18850	25	67	0.7282
495	510	63281	1	5	0.8459	46107	31	10	0.258