

7 'SCOTLAND PROPER' DATASET

Introduction: What is the 'Scotland proper' dataset?

Up to the middle of the thirteenth century, the kings of Scots ruled over more a collection of divergent lands with different laws and customs than a single unified country. The most significant of these were generally seen as being Lothian, Strathclyde, and Galloway in the south of the kingdom, and 'Scotia' or 'Scotland proper' and Moray in the north. The term 'Scotland' was somewhat open-ended, but always referred to lands north of the Firth of Forth. As part of a broader historical analysis of a fairly tightly-defined 'Scotland proper' between the Rivers Forth and Spey (or more accurately, the counties of Banffshire, Aberdeenshire, Kincardineshire, Angus, Perthshire, Kinross-shire, Clackmannanshire, Fife, and the small part of Stirlingshire north of Forth), a bespoke dataset has been created out of the larger PoMS dataset which has been used thus far for our social network analyses. The documents in the 'Scotland proper' dataset have the same chronological limits as the main dataset, but only refer to possessions and privileges within 'Scotland proper', or have place-dates or other clear evidence that they were produced in 'Scotland proper'. This analysis of a major region within the kingdom thus offers us the potential for comparison with the broader PoMS dataset.

As Table 7.1 shows, there are 1841 documents of the five specified document types we have been looking at for all of our co-witnessing analyses. About 85% of these documents have witnesses, and have thus been included in the social network analysis. Of the 1572 documents with witnesses, as usual, the great majority (1473) are charters strictly speaking. About 89 percent of charters and charter/brieves had witnesses, about two-thirds of agreements had witnesses, but only about a third of settlements did. The proportions of various document types are shown in Figure 7.1. Table 7.2 breaks down the numbers according to grantor category. While 96% of royal documents had witnesses, only 76% of private charters did – this likely due to the witnesses not always being copied into cartularies. As Figure 7.2 shows 39 percent of the documents with witnesses were lay or private, 34% were royal, 22 percent had ecclesiastical grantors, and only 5 percent were two-sided documents.

Table 7.1. Breakdown of documents in 'Scotland proper' dataset

Document Type	Scotland proper (potential)	Scotland proper (docs with witnesses)	% docs with witnesses
Agreement	90	61	67.8%
Charter	1664	1473	88.5%
Charter/brieve	9	8	88.9%
Notification	36	16	44.4%
Settlement	42	14	33.3%
Totals	1841	1572	85.4%

Figure 7.1 Proportions of document types in 'Scotland proper' dataset

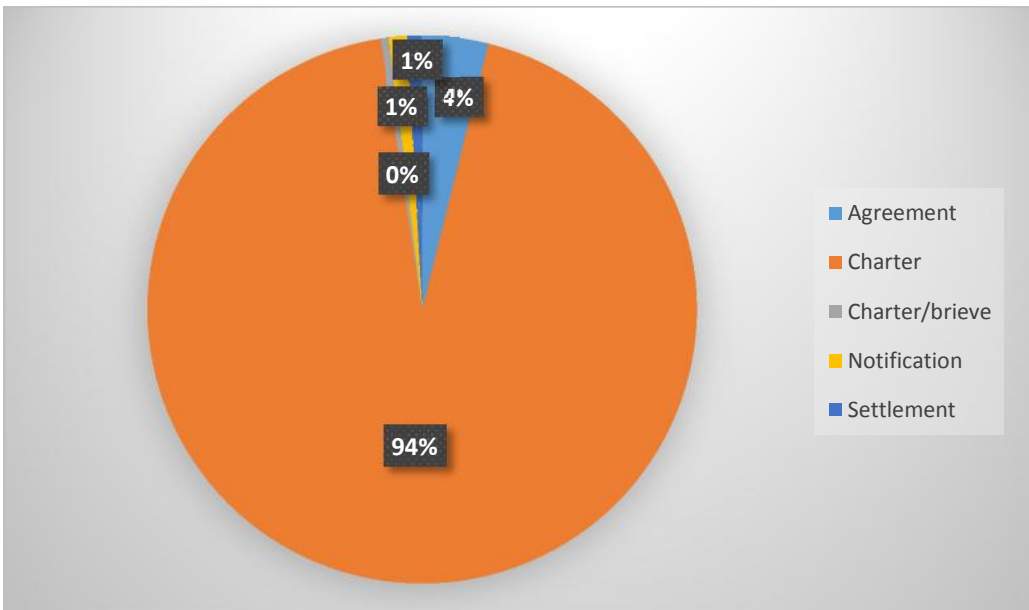


Table 7.2. Breakdown according to grantor category

H	Grantor category	Scotland proper (potential)	Scotland proper (SNA dataset)	% docs with witnesses
H1/	Royal	555	534	96.2%
H2/	Ecclesiastical	454	347	76.4%
H3/	Lay or private	692	614	88.7%
H4/	Two-sided documents	140	77	55%
Totals		1841	1572	85.4%

Figure 7.2. Proportions of SP documents according to grantor category

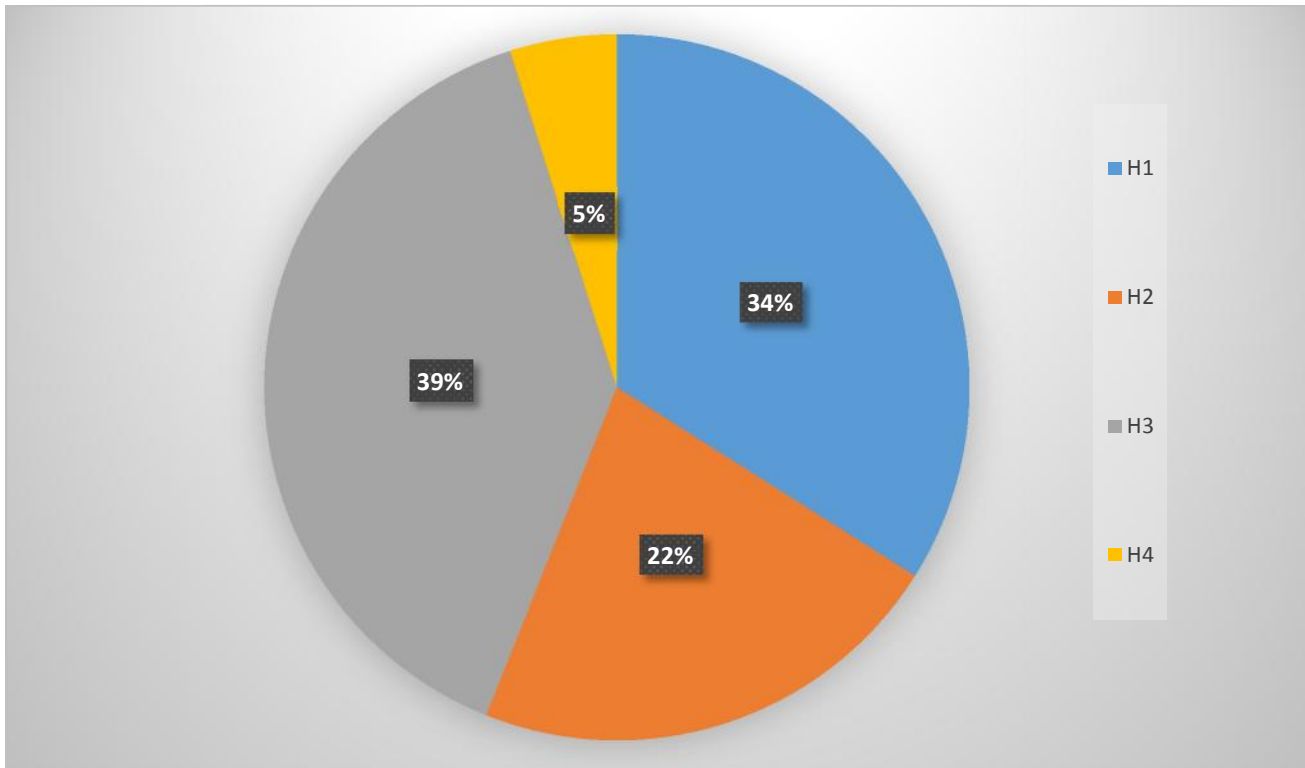


Table 7.3 lists the various kinds of primary transactions included in the dataset of Scotland proper documents, and the proportions of these are illustrated by Figure 7.3. The proportions are very similar to the dataset for the whole kingdom. Gifts and foundations amounted to 40.8%, as compared to 41.9% for the larger dataset, while confirmations were 21.4% and renewals were 15.9%, as compared to 19.6% and 13.6% for the whole kingdom, respectively. As in the larger study, the standard fodder for charters, that is to say, gifts, confirmations, renewals, quitclaims, successions and sales accounted for about 90% of all transactions.

Figure 7.3. Proportions of transaction types in Scotland proper dataset

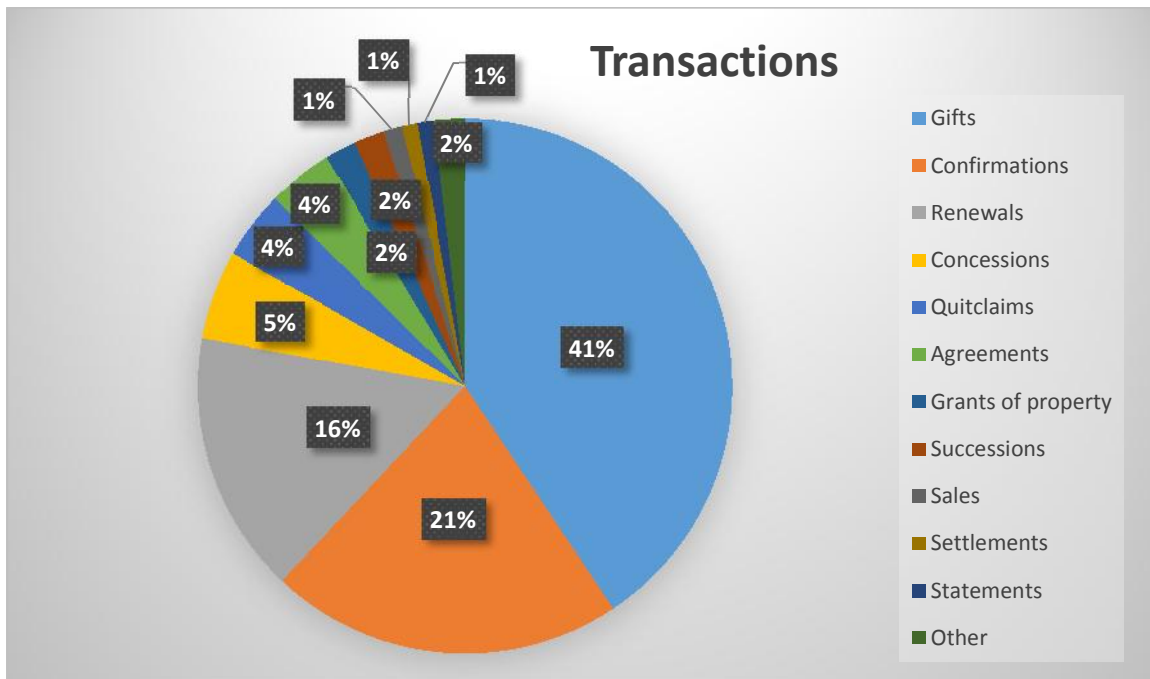


Table 7.3. Breakdown of transactions in study

Transaction type	Number of transactions	Percentage of transactions
Gifts and foundations ¹	641	40.8%
Confirmations	337	21.4%
Renewals	250	15.9%
Concessions ²	85	5.4%
Quitclaim & Resignation ³	65	4%
Agreements	62	3.9%
Grants of property (<i>condedo</i>)	30	1.9%
Successions	29	1.8%
Sales	18	1.1%
Settlements	15	
Statements ⁴	11	
Inspections	9	
Obligations	5	
Leases / wadset	5	
Institutions & ordination of vicarage	4	
Other/ misc.	7	
	1573	

¹ Plus one infetment and three gifts (agreement)

² Including concession (agreements) the following follow same pattern

³ And renunciations of claim

⁴ Plus acknowledgement

There were 3834 witnesses, engaged in 13,590 acts of witnessing. This is slightly less than half of the numbers for the whole kingdom analysis, where there were 8967 witnesses in 31,448 acts of witnessing. Of these witnesses, 18 were women (see Table 7.3). There were 44,171 edges in the SNA sociogram.

Table 7.3. List of women who witnessed in the Scotland proper dataset

PoMS ID	Person
84	Ela, countess of Fife
95	Ada de Warenne (d.1178), countess of Northumberland
5497	Hextilda, countess of Atholl
1365	Margery, countess of Buchan (d.c.1244)
5508	Margaret, countess of Atholl
6663	Eleanor, daughter of William de Ferrers, wife of Roger de Quincy
426	Matilda d'Aubigny, countess of Strathearn
6855	Matilda, wife of Earl Malcolm (I) of Fife
1010	Agatha, wife of Humphrey Barclay
11464	Avice, daughter of Ela
1195	Eve, wife of William Hay, lord of Errol
11534	Ada, wife of Thomas Hay (12C)
6664	Orable, daughter of Ness son of William
13849	Margery Lindsay
14251	Margaret (mother of William de Valognes TRA3)
14254	Mary, sister of William de Valognes (TRA3)
6957	Soliva, wife of Robert of Meckphen
56	Ermengarde de Beaumont, queen of Scots (d.1233)

It is useful to compare the people with the highest betweenness centrality in the Scotland proper dataset with those for the whole country dataset (See Table 7.4, below). William del Bois, chancellor (d.1232), number one for the whole dataset, descends to the number 4 position in the SP dataset, while Duncan (II), earl of Fife (d.1204), number two in the whole dataset, rises to the number one spot here. Most of the other top individuals for the whole database are not among the top 20 in Scotland proper. This includes the stewards Alan and Walter (II), Earl Patrick (I) of Dunbar, the justiciar of Lothian Walter Oliphant (II), and bishops of Glasgow and Moray. The only other individuals from the top ten of the whole database in Table 7.4 are Malcolm (I), earl of Fife (d.1229) and John Hay (I), lord of Naughton (d.xOct.1266).

Table 7.4. Top 20 witnesses by betweenness (Scotland proper)

Rank	PoMS ID	Name	Betweenness
1	13	Duncan (II), earl of Fife (d.1204)	410757.9546
2	1389	John Hay (I), lord of Naughton (d.xOct.1266)	283253.5679
3	2	Matthew, bishop of Aberdeen (d.1199)	279272.0899
4	42	William del Bois, chancellor (d.1232)	263452.0193
5	5330	Henry, son of Geoffrey de Liberatione of Perth	191272.2987
6	3350	Adam of Makerstoun, master, provost (d.1280x86)	176565.4354
7	64	Henry of Stirling, son of Earl David	173445.9666
8	66	David Hay, lord of Errol (d.1237x41)	171602.6656
9	782	Malcolm (I), earl of Fife (d.1229)	167840.6777
10	260	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	166924.7103
11	7030	Philip Oliphant, knight (13C)	165156.8340
12	2190	Robert Mowat, knight, justiciar, sheriff of Forfar	158562.3396
13	43	John, abbot of Lindores (fl.1219-44)	153754.6311
14	6889	Malise, son of Earl Gilbert of Strathearn (d.c.1272)	153125.0822
15	1971	Alan Durward (d.1275)	152253.9960
16	40	William Malveisin, bishop of St Andrews (d.1238)	147944.2254
17	5364	John Cameron, sheriff of Perth	143655.0134
18	1233	Philip Melville, justiciar of Scotia	143153.5671
19	11393	Alan, clerk (13C)	123196.3214
20	2067	Gilbert Hay (I), lord of Errol (d.1263) (son of David)	122034.1579

The individuals with the highest degree and eigenvector centralities in the Scotland proper dataset were active for the most part in the period between about 1170 and about 1230. Notable are a group of figures who were highly interconnected in the last quarter of the twelfth century, notably Duncan (II), earl of Fife (d.1204), Matthew, bishop of Aberdeen (d.1199), Gilbert or Gilla Brigte, earl of Strathearn (d.1223), Philip de Valognes, chamberlain (d.1215), William Hay (I), lord of Errol (d.c.1201). These men all had landholding and other interests in Fife, southern Perthshire, and Angus. They co-witnessed, especially in the context of the royal court, with contemporaries David, earl of Huntingdon (d.1219), Andrew, bishop of Caithness (d.1184), Ness, son of William, lord of Leuchars (d.1178x83) and Robert de Quincy (d.1200). The later part of King William's reign and the early part of Alexander II's reign were dominated by William del Bois, chancellor (d.1232), Malcolm (I), earl of Fife (d.1229), and especially William Comyn, earl of Buchan (d.1233). Most of the bishops listed in Table 7.5 had close royal connections, acting as royal clerks, chaplains, or chancellors.

Table 7.5. Top 21 witnesses by degree (Scotland proper)

Rank	PoMS ID	Name	Degree
1	13	Duncan (II), earl of Fife (d.1204)	487
2	2	Matthew, bishop of Aberdeen (d.1199)	425
3	260	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	310
4	42	William del Bois, chancellor (d.1232)	309
5	782	Malcolm (I), earl of Fife (d.1229)	288
6	15	Philip de Valognes, chamberlain (d.1215)	255
7	16	William Comyn, earl of Buchan (d.1233)	250
8	66	David Hay, lord of Errol (d.1237x41)	241
8	24	William Hay (I), lord of Errol (d.c.1201)	241
10	798	Richard de Prebenda, bishop of Dunkeld (d.1210)	234
11	142	David, earl of Huntingdon (d.1219)	222
12	850	John Scott, bishop of Dunkeld (d.1203)	215
13	202	Andrew, bishop of Caithness (d.1184)	213
14	1389	John Hay (I), lord of Naughton (d.xOct.1266)	209
15	829	Ranulf de Wat, archdeacon of St Andrews (d.1209)	204
16	841	Malise, son of Ferteth earl of Strathearn (d.a.1214)	201
17	4	Ness, son of William, lord of Leuchars (d.1178x83)	200
18	14	Robert de Quincy (d.1200)	186
19	478	Henry, abbot of Arbroath (fl.1179-1207)	185
20	40	William Malveisin, bishop of St Andrews (d.1238)	178
20	39	Hugh de Sigillo, bishop of Dunkeld (d.1229 or 1230)	178

It should not be surprising by now that Duncan (II), earl of Fife (d.1204) occupies an unassailable spot in terms of the eigenvector centrality among Scotland proper documents. The exceptionally well-connected Matthew, bishop of Aberdeen, holds only an 87.5% score, with other key figures, such as William Comyn, earl of Buchan, and William del Bois, chancellor, managing only 61.6% and 56.7%, respectively. There are no great surprises on the eigenvector league table for Scotland proper as it is largely occupied by the same familiar names as the degree centrality table. Most of these men were also fairly prominent in the SNA study of the whole database.

Table 7.6. Top 20 witnesses by eigenvector (Scotland proper)

Rank	PoMS ID	Name	Eigenvector
1	13	Duncan (II), earl of Fife (d.1204)	1
2	2	Matthew, bishop of Aberdeen (d.1199)	0.875450565
3	260	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	0.760963387
4	782	Malcolm (I), earl of Fife (d.1229)	0.685512636
5	24	William Hay (I), lord of Errol (d.c.1201)	0.668670027
6	15	Philip de Valognes, chamberlain (d.1215)	0.661281159
7	798	Richard de Prebenda, bishop of Dunkeld (d.1210)	0.655126297
8	16	William Comyn, earl of Buchan (d.1233)	0.61644977
9	142	David, earl of Huntingdon (d.1219)	0.604677418
10	850	John Scott, bishop of Dunkeld (d.1203)	0.57034643
11	42	William del Bois, chancellor (d.1232)	0.56772836
12	66	David Hay, lord of Errol (d.1237x41)	0.543237506
13	14	Robert de Quincy (d.1200)	0.53934394
14	202	Andrew, bishop of Caithness (d.1184)	0.524489101
15	1	William I, king of Scots (d.1214)	0.521118205
16	110	Gilla Brigte, earl of Angus (d.x1189)	0.517727468
17	478	Henry, abbot of Arbroath (fl.1179-1207)	0.501802042
18	39	Hugh de Sigillo, bishop of Dunkeld (d.1229 or 1230)	0.493999729
19	820	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	0.490623259
20	185	Geoffrey (I) Melville	0.490281247

The Netdraw sociogram of all witnesses to the Scotland proper SNA study is familiar as a slightly thinned-out version of the 'fish' sociogram (see Figure 4.4). At the level of more than 10 witnessing acts (Figure 7.6), it is possible to make out a main segment of nodes bearing some resemblance to the three-pronged structure in the larger study (see Figures 4.7 and 4.8). While the chronological sweep is still evident, with earlier people on the right, a large agglomeration of nodes during the reign of William I, and the central positions of [13] Earl Duncan and [42] William del Bois evident, what is immediately noticeable is the disappearance of the large segment of Coldingham witnesses branching off towards the bottom of the page. The close-up of this segment in the Scotland proper at the level of witnessing more than 15 times (Figure 7.8) is most comparable to the study of more than 20 witnessing acts in the larger dataset.

Figure 7.4. Netdraw: 'Scotland proper' dataset witnesses

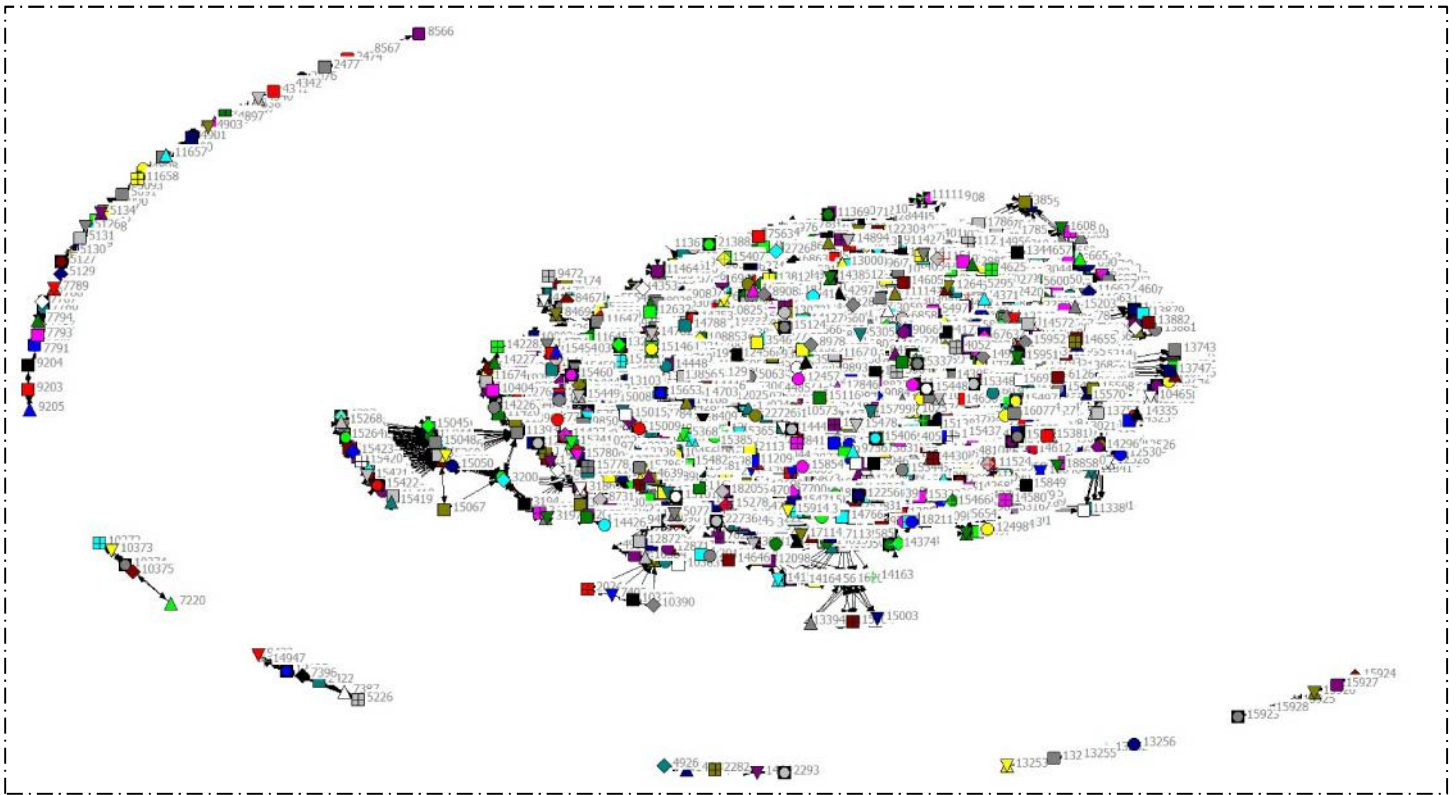


Figure 7.5. Netdraw: 'Scotland proper', more than 5 co-witnessing acts

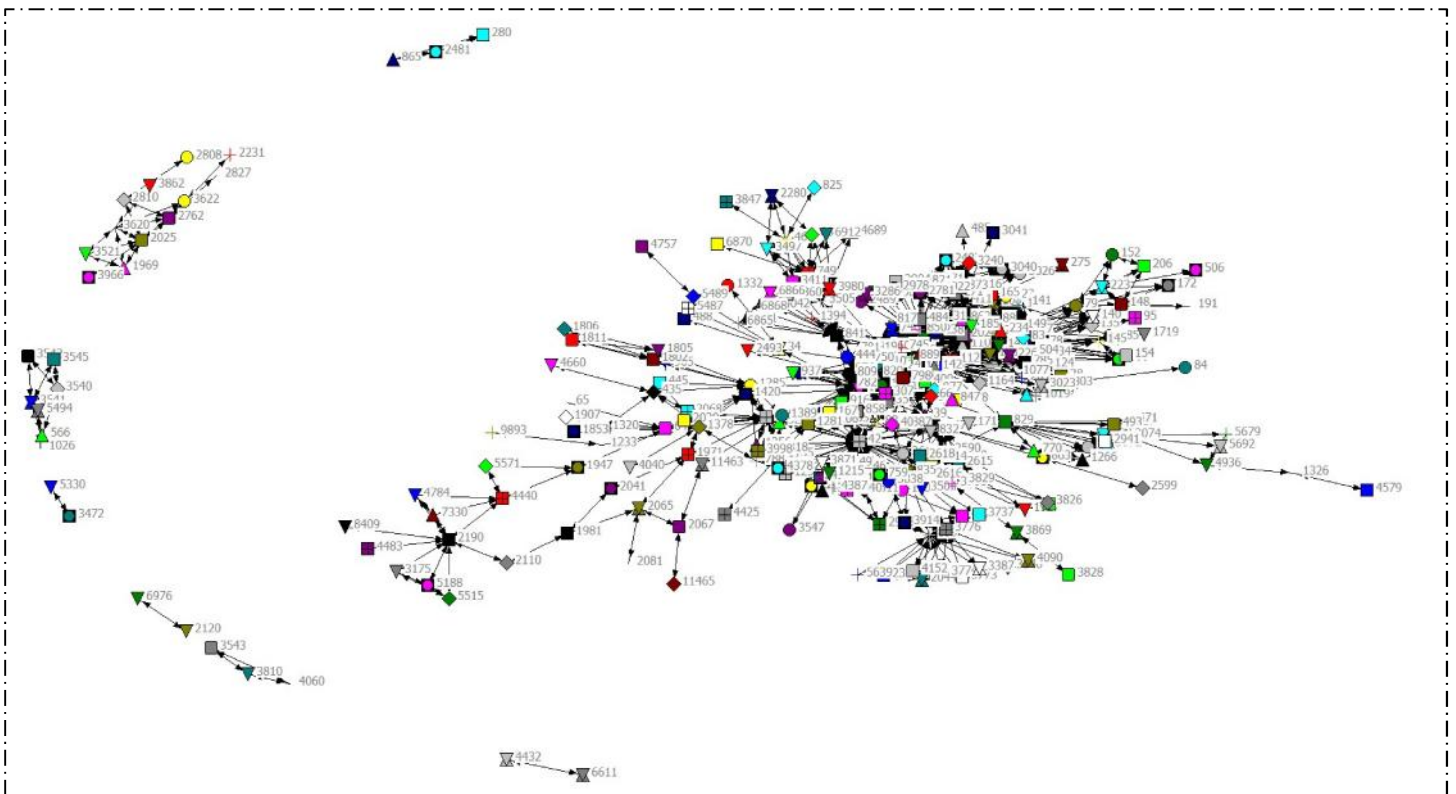


Figure 7.6. Netdraw: 'Scotland proper', more than 10 co-witnessing acts

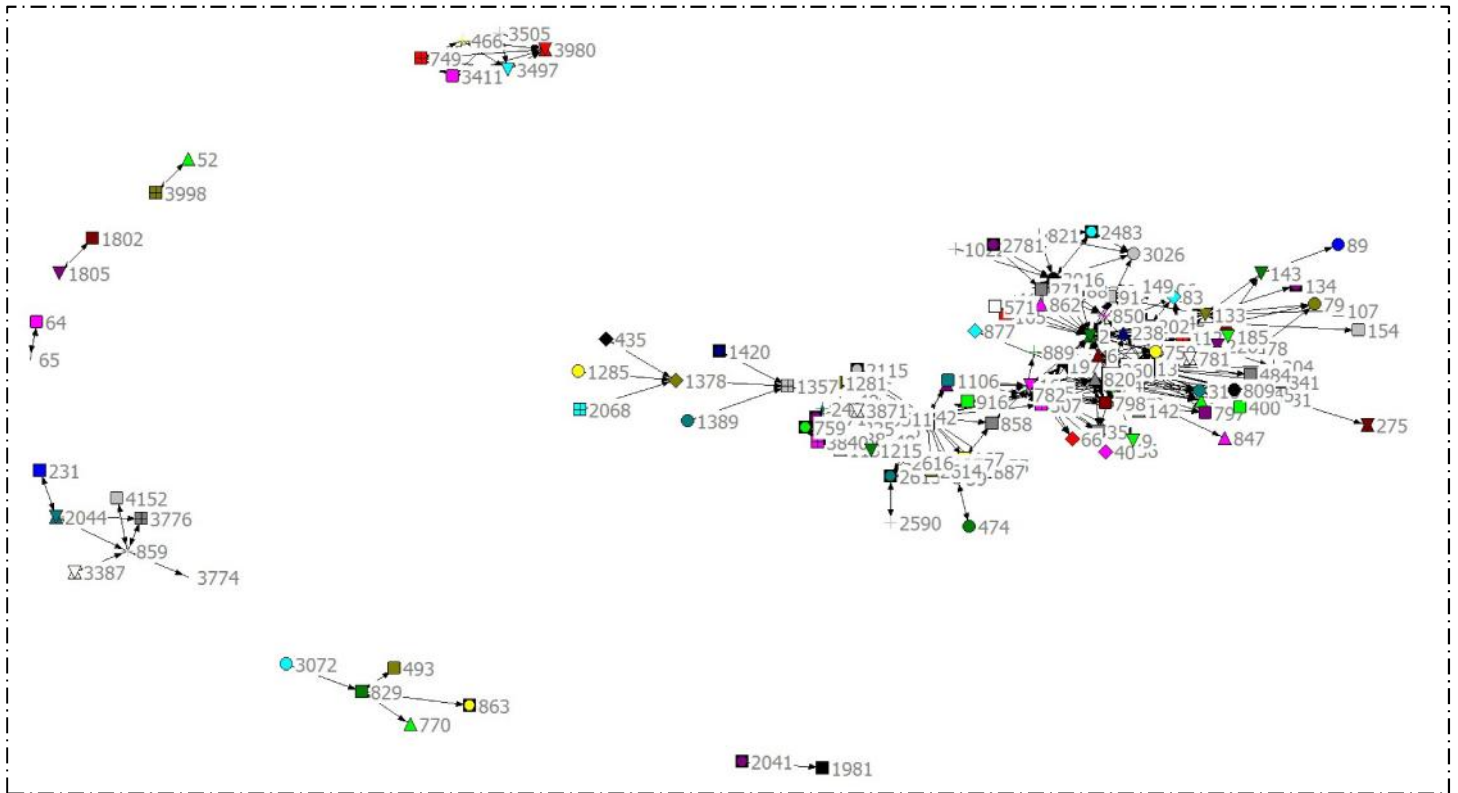


Figure 7.7. Netdraw: 'Scotland proper', more than 15 co-witnessing acts

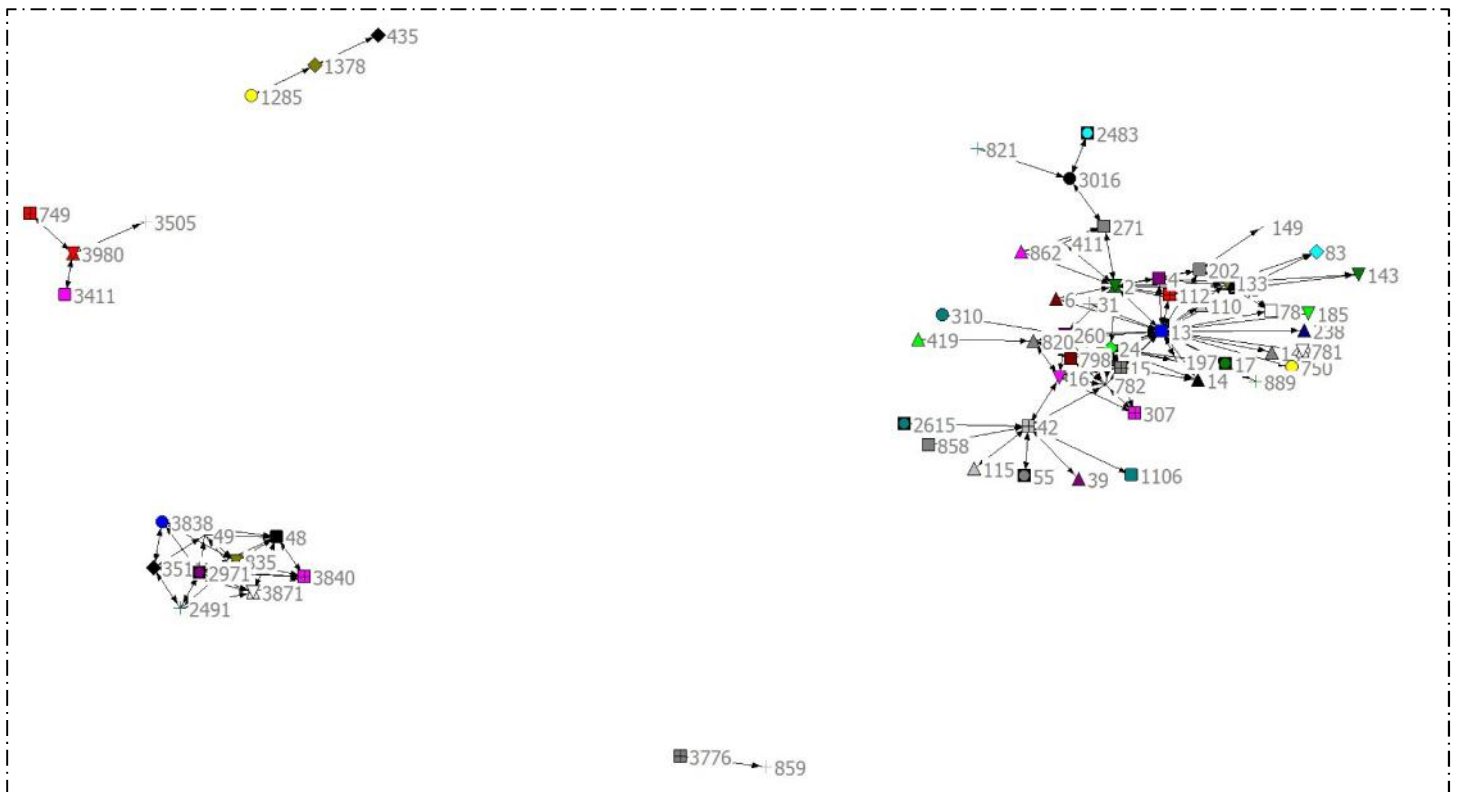


Figure 7.8. Netdraw: 'Scotland proper', more than 15 co-witnessing acts (close-up)

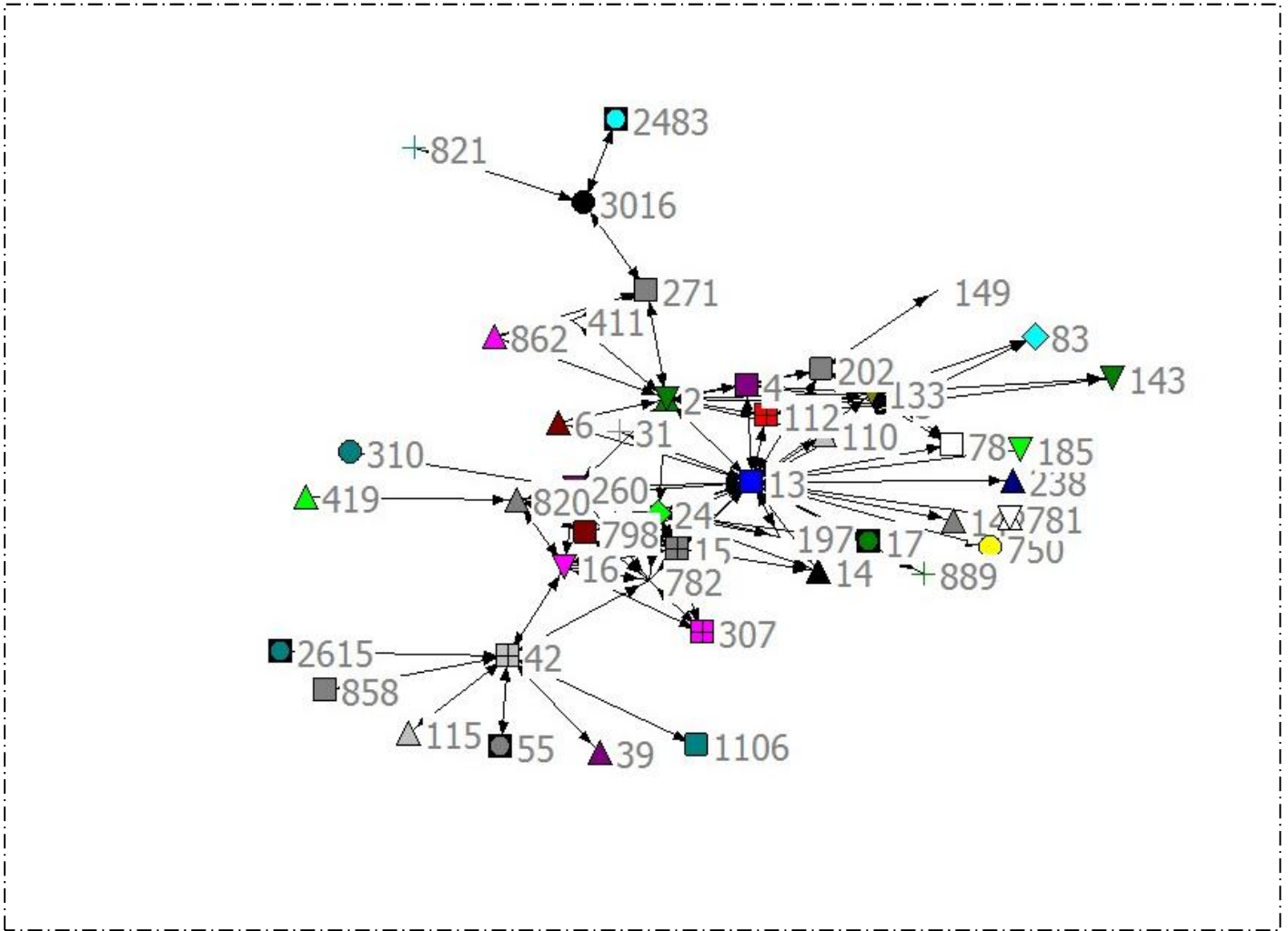
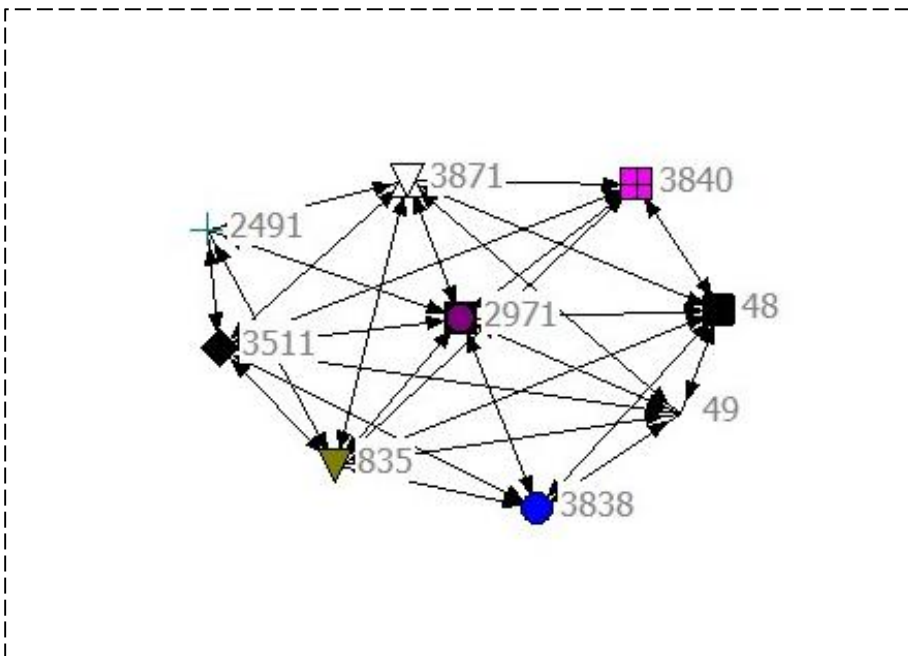


Figure 7.9. Netdraw: 'Scotland proper', more than 15 co-witnessing acts (close-up)



All of the individuals who co-witnessed more than fifteen times are listed in Table 7.7 along with their centrality numbers at that level. Figure 7.9 offers a close-up of the second-largest segment of the study of individuals who co-witnessed more than 15 times. These men were all part of the St Andrews church establishment during the episcopate of Bishop William Malveisin (1202-38). The segment represents a highly interconnected group of triads and cliques. Of the 9 men, all of the other eight are linked to Peter the chaplain, and most of the men have witnessed more than fifteen times with most of the others in the segment.

[48]	Simon de Noisy, clerk of Bishop William of St Andrews
[49]	William of Gullane, rector of Gullane
[835]	Laurence of Thornton, archdeacon of St Andrews (d.1238x40)
[2491]	Stephen of Lilliesleaf, master, clerk, persona
[2971]	Peter, chaplain and clerk of Bishop Malveisin
[3511]	Michael, master, clerk, chaplain (fl.1201-1220x25)
[3838]	Adam Ovid, master (fl.1203-33)
[3840]	Peter of Dryburgh, master, clerk
[3871]	Edward Murray, master, canon, bishop's clerk

The largest segment of people who co-witnessed more than 15 times. The position of [13] Duncan (II), earl of Fife, is very significant. In betweenness at this level, his score of 564 is more than twice that of [2] Bishop Matthew of Aberdeen (261), [42] William del Bois (249), and [16] William Comyn earl of Buchan (146). Earl Duncan co-witnessed with 26 people more than 15 times in the Scotland proper database, while Bishop Matthew only co-witnessed with 13, and William Comyn and William del Bois only witnessed alongside eight others. The high eigenvector and degree scores of Duncan, Matthew, [24] William Hay and [260] Earl Gilbert – the only four to be connected to at least ten other witnesses, and to have eigenvector scores of over 50% - underline the importance of the network which bound together these four power-players in the central area of Southern Perthshire and Fife. This is demonstrated in Figure 7.16, which shows that William Hay and Earl Duncan witnessed together 53 times, Bishop Matthew and Earl Duncan witnessed together 57 times, and Earl Gilbert and Earl Duncan witnessed together 61 times.

Table 7.7. Centrality: network of people who co-witness more than 15 times

PoMS ID	Name	Degree	Betweenness	Eigenvector
13	Duncan (II), earl of Fife (d.1204)	26	563.8167	1
2	Matthew, bishop of Aberdeen (d.1199)	13	260.75	0.605126
24	William Hay (I), lord of Errol (d.c.1201)	12	80.233	0.642807
260	Gilbert or Gilla Brigitte, earl of Strathearn (d.1223)	10	82.1	0.580194
3	Walter Stewart (I), son of Alan (d.1177)	9	47.75	0.437621
16	William Comyn, earl of Buchan (d.1233)	8	145.5167	0.472665
42	William del Bois, chancellor (d.1232)	8	249	0.13706
133	Nicholas of Roxburgh, chancellor (d.1171?)	8	42.25	0.412351
835	Laurence of Thornton, archdeacon of St Andrews (d.1238×40)	8	1.9833	0.191163
2971	Peter, chaplain and clerk of Bishop Malveisin	8	1.9833	0.191163
202	Andrew, bishop of Caithness (d.1184)	7	47	0.385039
820	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	7	44.45	0.434888
782	Malcolm (I), earl of Fife (d.1229)	7	128.6667	0.421234
3511	Michael, master, clerk, chaplain (fl.1201-1220×25)	7	1.4833	0.170497
3871	Edward Murray, master, canon, bishop's clerk	7	1.2	0.172998
15	Philip de Valognes, chamberlain (d.1215)	6	3.0667	0.415068
48	Simon de Noisy, clerk of Bishop William of St Andrews	6	0.65	0.152755
49	William of Gullane, rector of Gullane	6	0.3667	0.157347
4	Ness, son of William, lord of Leuchars (d.1178×83)	5	0	0.353743
798	Richard de Prebenda, bishop of Dunkeld (d.1210)	5	0.4	0.377853
3838	Adam Ovid, master (fl.1203-33)	5	0.166667	0.13398
3840	Peter of Dryburgh, master, clerk	5	0.166667	0.136408
112	Richard de Moreville (d.1189 or 1190)	4	0	0.305625
271	Robert, son of Saewulf, bishop's chancellor	4	126	0.110872
2491	Stephen of Lilliesleaf, master, clerk, persona	4	0	0.112624
14	Robert de Quincy (d.1200)	3	0	0.252535
78	Walter de Bidun (d.1178)	3	0	0.226673
411	Andrew, archdeacon of Lothian (fl.1147×59-1178×84)	3	0	0.106591
3016	Alexander, chaplain of bishops of St Andrews (12C)	3	87	0.021168
862	Herbert Scott, master, clerk (fl.1144×59-1172×78)	3	0	0.106591
197	William Lindsay (II) (d.c.1205)	3	0	0.272732
307	Robert of London (d.1225)	3	0	0.188584
3980	Malise, son of Gilla na Naem, steward of earls of Strathearn	3	3	0.00708
17	John (I) Hastings, sheriff (12/13C)	2	0	0.202074
110	Gilla Brigitte, earl of Angus (d.×1189)	2	0	0.199233
143	Ingram, bishop of Glasgow (d.1174)	2	0	0.106392
83	David Oliphant (12C)	2	0	0.106392
6	Walter Barclay, chamberlain (d.c.1193)	2	0	0.199233
1378	Walter Stewart (II), son of Alan (d.1241)	2	1	0.004363
39	Hugh de Sigillo, bishop of Dunkeld (d.1229 or 1230)	1	0	0.020736
55	Richard Revel, lord of Coultra (d.1215×25)	1	0	0.020736
142	David, earl of Huntingdon (d.1219)	1	0	0.123755

149	Gregory, bishop of Dunkeld (d.1169)	1	0	0.048118
238	Malcolm, earl of Atholl (d.c.1197)	1	0	0.123755
185	Geoffrey (I) Melville	1	0	0.123755
31	Hugh Gifford, lord of Yester	1	0	0.123755
419	Archibald, abbot of Dunfermline (d.1198)	1	0	0.053058
310	William de Moreville (d.1196)	1	0	0.070658
750	Robert Barclay, brother of Walter	1	0	0.123755
781	Richard of Lincoln, bishop of Moray (d.1203)	1	0	0.123755
889	Adam of Ceres, knight (fl.1154×1200)	1	0	0.123755
858	Walter of St Albans, bishop of Glasgow (d.1232)	1	0	0.020736
1106	Philip de Mowbray	1	0	0.020736
1285	Walter Oliphant, justiciar of Lothian (son of Walter) (d.1242)	1	0	0.002829
821	Walter of Roxburgh, archdeacon of St Andrews (fl.1165×72-1179×88)	1	0	0.005371
2615	Mael Brigte MacLeod, prior of <i>céli De</i> of Brechin	1	0	0.020736
749	Abraham, bishop of Dunblane (fl.1210×14-1220×25)	1	0	0.003702
2483	Gamel, doorward, master (St Andrews)	1	0	0.005371
3411	Brice, persona of Crieff	1	0	0.003702
859	Alexander de St Martin, master (fl.1214×40-1247)	1	0	0.002008
3776	Hugh of Melburne, master	1	0	0.002008
115	Simon of St Andrews, master (fl.1199/1200-1212×18)	1	0	0.020736
3505	Robert, earl of Strathearn (1223-45)	1	0	0.003702
435	William of Bondington, bishop of Glasgow (d.1258)	1	0	0.002829

Figure 7.10. Netdraw: 'Scotland proper', more than 20 co-witnessing acts

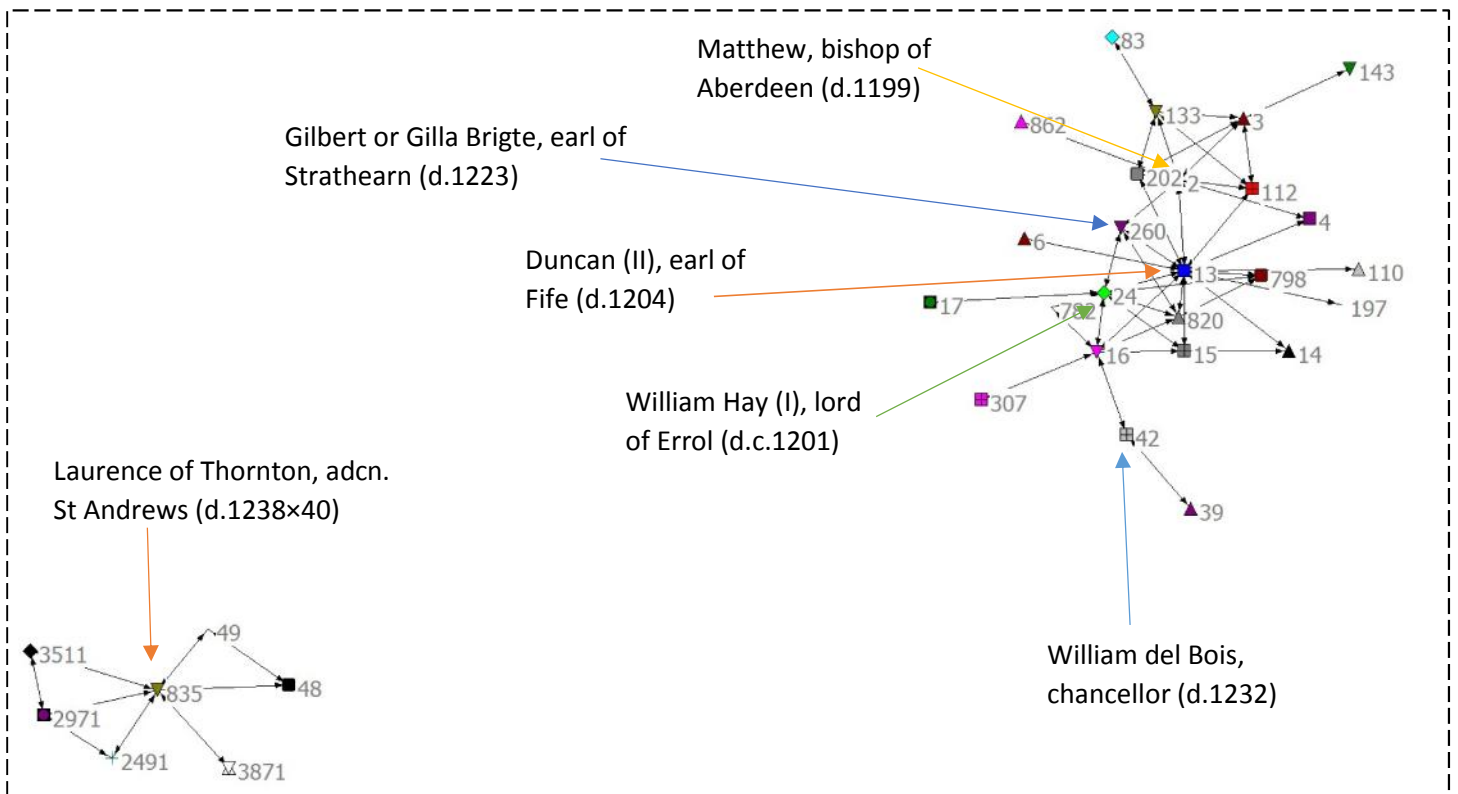


Figure 7.11. Netdraw: 'Scotland proper', more than 25 co-witnessing acts

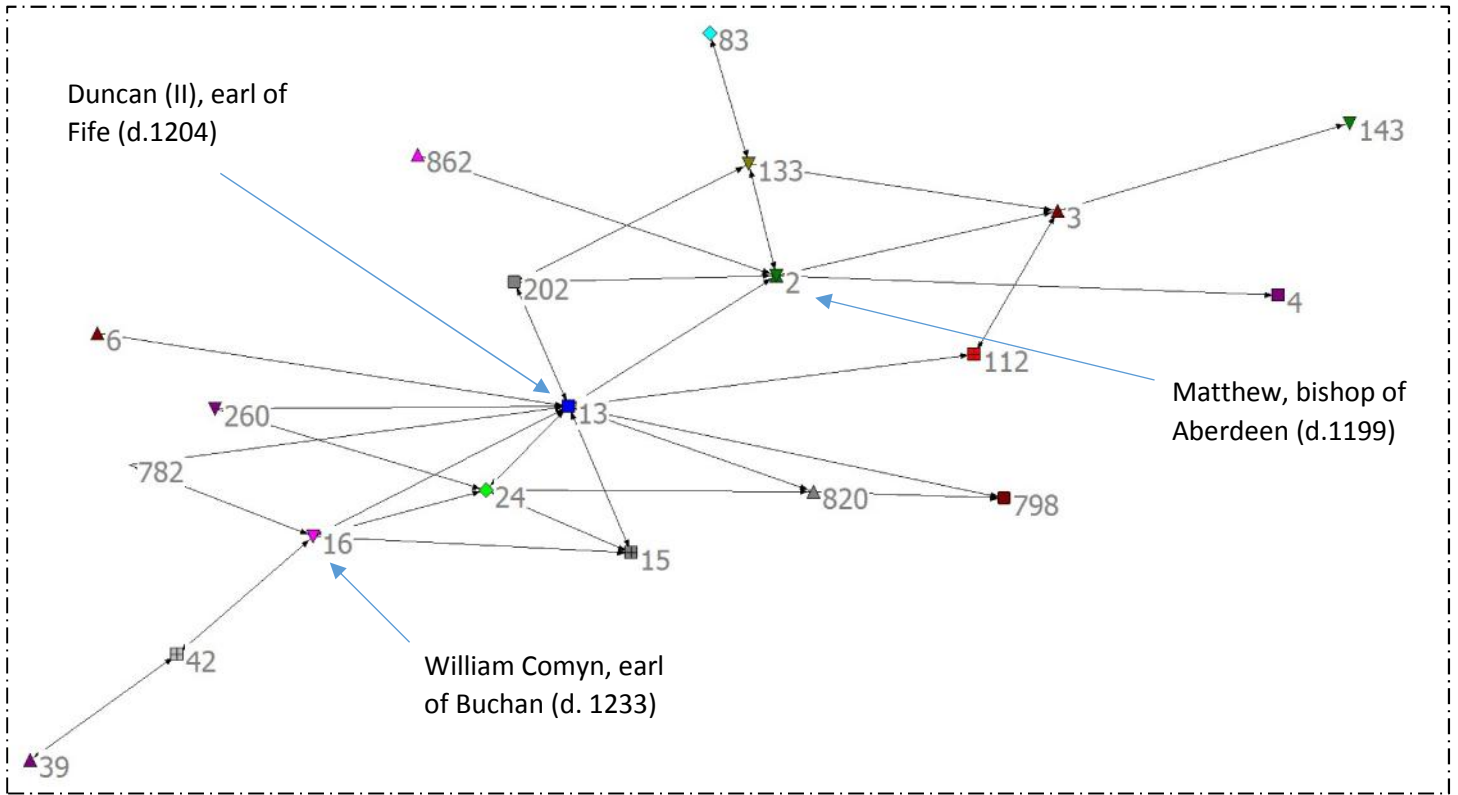


Figure 7.12. Netdraw: 'Scotland proper', more than 30 co-witnessing acts

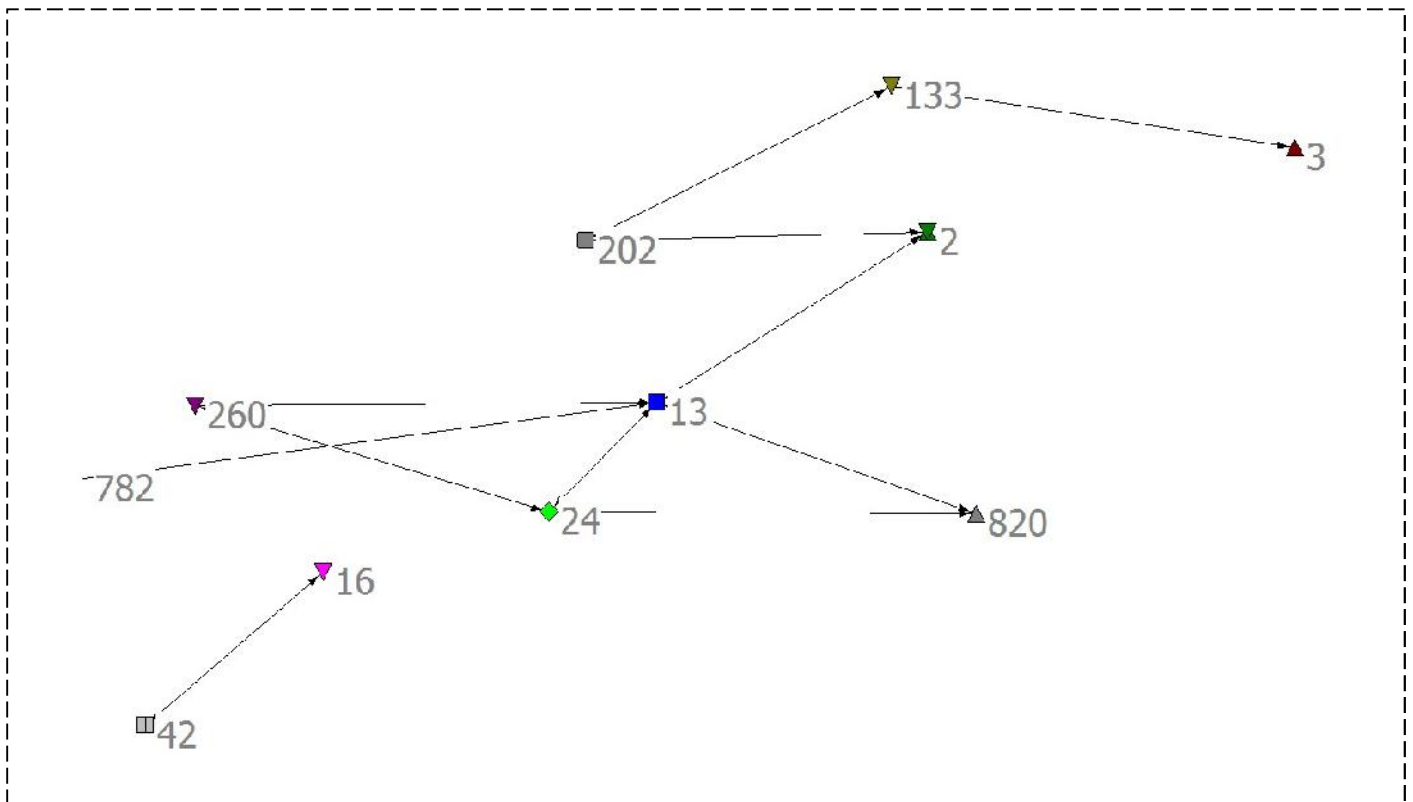


Figure 7.15. Netdraw: 'Scotland proper', more than 45 co-witnessing acts

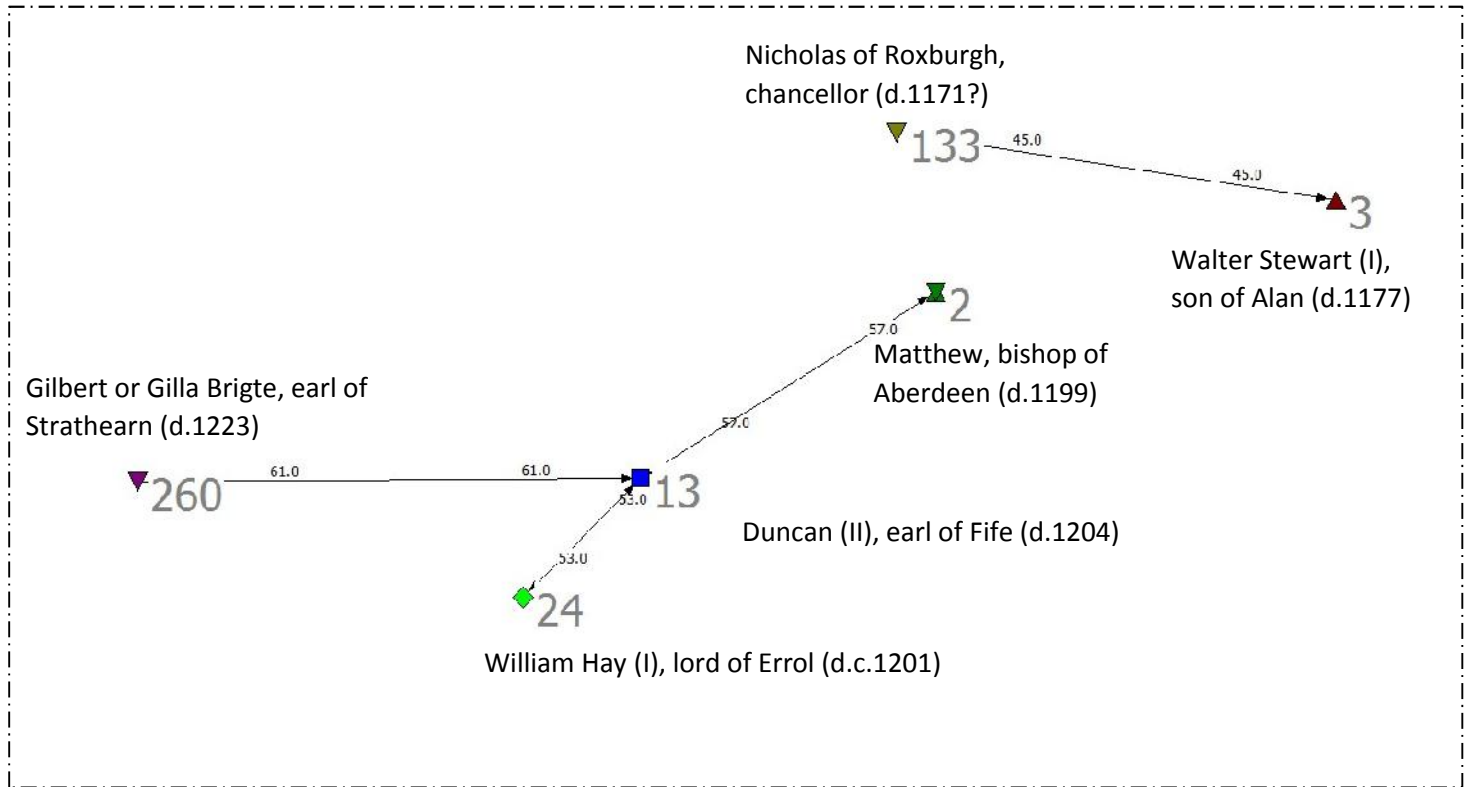


Figure 7.16. Netdraw: 'Scotland proper', more than 50 co-witnessing acts

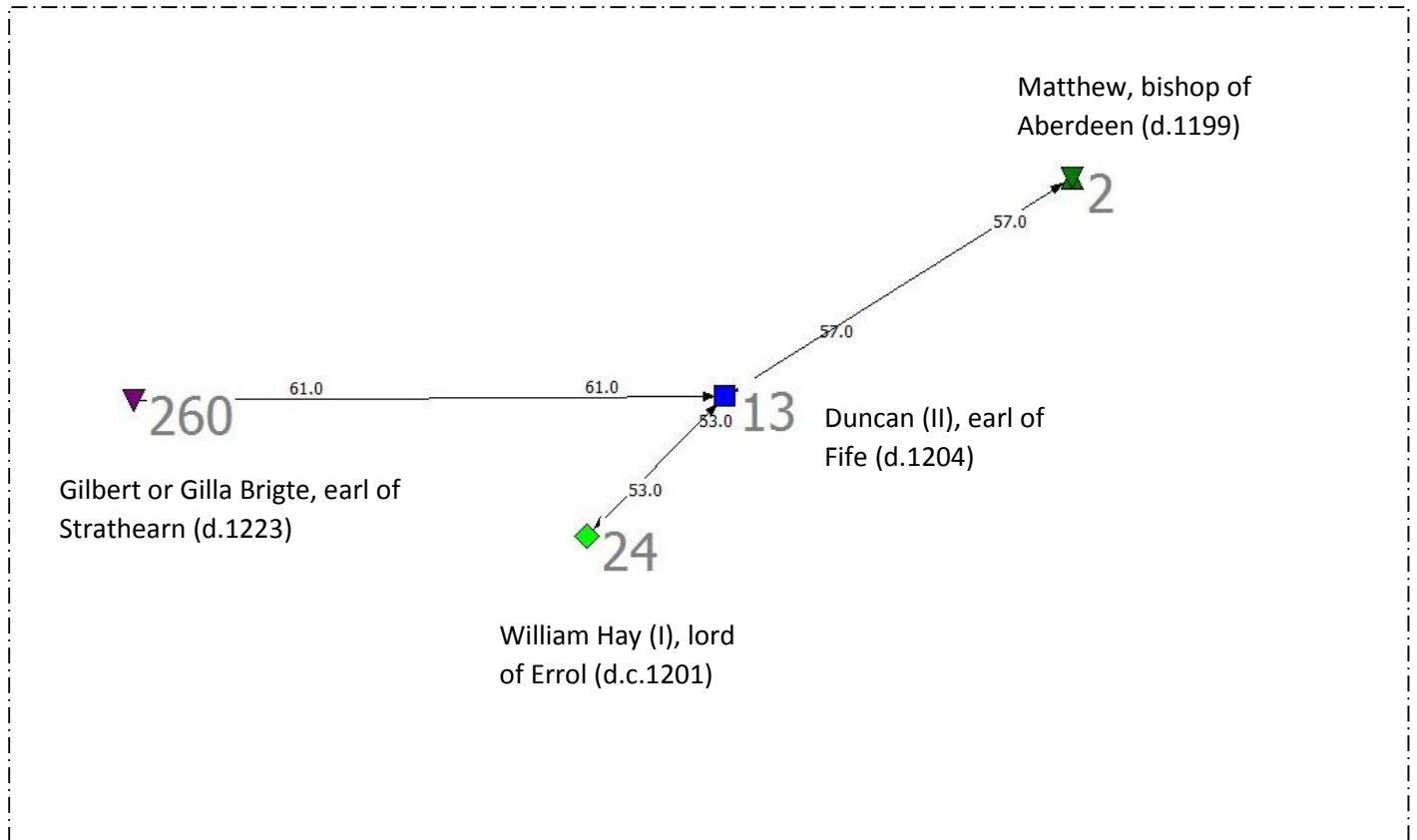


Table 7.8. Most productive co-witnessing 'relationships' (25 and above)

Person 1	Person 2	Docs witnessed
Duncan (II), earl of Fife (d.1204)	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	61
Duncan (II), earl of Fife (d.1204)	Matthew, bishop of Aberdeen (d.1199)	57
Duncan (II), earl of Fife (d.1204)	William Hay (I), lord of Errol (d.c.1201)	53
Walter Stewart (I), son of Alan (d.1177)	Nicholas of Roxburgh, chancellor (d.1171?)	45
Matthew, bishop of Aberdeen (d.1199)	Andrew, bishop of Caithness (d.1184)	38
William Hay (I), lord of Errol (d.c.1201)	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	37
William Hay (I), lord of Errol (d.c.1201)	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	33
William Comyn, earl of Buchan (d.1233)	William del Bois, chancellor (d.1232)	32
Nicholas of Roxburgh, chancellor (d.1171?)	Andrew, bishop of Caithness (d.1184)	32
Duncan (II), earl of Fife (d.1204)	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	31
Duncan (II), earl of Fife (d.1204)	Malcolm (I), earl of Fife (d.1229)	31
Duncan (II), earl of Fife (d.1204)	William Comyn, earl of Buchan (d.1233)	30
Duncan (II), earl of Fife (d.1204)	Andrew, bishop of Caithness (d.1184)	30
Duncan (II), earl of Fife (d.1204)	Walter Barclay, chamberlain (d.c.1193)	30
William Comyn, earl of Buchan (d.1233)	William Hay (I), lord of Errol (d.c.1201)	30
Philip de Valognes, chamberlain (d.1215)	William Hay (I), lord of Errol (d.c.1201)	29
Matthew, bishop of Aberdeen (d.1199)	Ness, son of William, lord of Leuchars (d.1178x83)	29
Duncan (II), earl of Fife (d.1204)	Philip de Valognes, chamberlain (d.1215)	28
Philip de Valognes, chamberlain (d.1215)	William Comyn, earl of Buchan (d.1233)	28
Richard de Moreville (d.1189 or 1190)	Walter Stewart (I), son of Alan (d.1177)	28
Matthew, bishop of Aberdeen (d.1199)	Nicholas of Roxburgh, chancellor (d.1171?)	28
Matthew, bishop of Aberdeen (d.1199)	Herbert Scott, master, clerk (fl.1144x59-1172x78)	28
Nicholas of Roxburgh, chancellor (d.1171?)	David Oliphant (12C)	28
Duncan (II), earl of Fife (d.1204)	Richard de Moreville (d.1189 or 1190)	26
Duncan (II), earl of Fife (d.1204)	Richard de Prebenda, bishop of Dunkeld (d.1210)	26
William Comyn, earl of Buchan (d.1233)	Malcolm (I), earl of Fife (d.1229)	26
Hugh de Sigillo, bishop of Dunkeld (d.1229 or 1230)	William del Bois, chancellor (d.1232)	26
Matthew, bishop of Aberdeen (d.1199)	Walter Stewart (I), son of Alan (d.1177)	26
Walter Stewart (I), son of Alan (d.1177)	Ingram, bishop of Glasgow (d.1174)	26
Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	Richard de Prebenda, bishop of Dunkeld (d.1210)	26
Duncan (II), earl of Fife (d.1204)	Ness, son of William, lord of Leuchars (d.1178x83)	25
Matthew, bishop of Aberdeen (d.1199)	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	25

Duncan (II) earl of Fife was part of twelve pairs (37.5%) in the above table, and eight of the 15 pairs with 30 or more co-witnessing acts. Bishop Matthew was part of seven pairs. By contracts, William Comyn was part of five pairs and Philip de Valognes was part of only three pairs. The earlier generation is also represented here, with Walter son of Alan (I) (d. 1177) part of four pairs and Andrew, bishop of Caithness (d. 1184) part of three.

Figure 7.17. Gephi: Scotland proper, all witnesses



The following series of Gephi sociograms allows us to visualize the most central players in the Scotland proper dataset against the backdrop of all the nodes in the network, with the chronological sweep going from mid-twelfth century on the right to late thirteenth century on the left. The label size reflects the eigenvector centrality of the witnesses. This approach is particularly valuable at the level of thirty or more co-witnessing acts, because it illustrates the positions of top players chronologically, from [3] Walter Stewart (I) (d. 1177) through to [42] William del Bois, chancellor (d. 1232).

Scotland proper dataset, witnesses to royal documents (H1)

There were 534 documents in the study of royal charters relating to Scotland proper, of which 520 were charters, 6 were charter/brieves, five were notifications, and two were settlements. There were 681 witnesses in the study, two of whom were women, and there were 9782 edges connecting them up.

Table 7.9. Centrality: Top 20 Witnesses by Degree

Poms ID	Person	Degree	Betweenness Centrality	Eigenvector Centrality
13	Duncan (II), earl of Fife (d.1204)	248	19083.3	1
2	Matthew, bishop of Aberdeen (d.1199)	210	15746.31	0.902159
15	Philip de Valognes, chamberlain (d.1215)	174	14355.41	0.755704
16	William Comyn, earl of Buchan (d.1233)	173	23789.55	0.623858
24	William Hay (I), lord of Errol (d.c.1201)	173	5202.116	0.796621
202	Andrew, bishop of Caithness (d.1184)	170	8882.087	0.741165
3	Walter Stewart (I), son of Alan (d.1177)	165	5020.404	0.680665
260	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	159	4901.973	0.770658
14	Robert de Quincy (d.1200)	152	3169.89	0.750835
112	Richard de Moreville (d.1189 or 1190)	146	4471.07	0.696345
798	Richard de Prebenda, bishop of Dunkeld (d.1210)	142	3020.392	0.680882
110	Gilla Brigte, earl of Angus (d.×1189)	141	2575.092	0.722699
133	Nicholas of Roxburgh, chancellor (d.1171?)	135	2794.402	0.597034
782	Malcolm (I), earl of Fife (d.1229)	133	8937.892	0.574969
4	Ness, son of William, lord of Leuchars (d.1178×83)	130	1764.723	0.607796
78	Walter de Bidun (d.1178)	122	4155.429	0.541806
1357	Walter Comyn, earl of Menteith (d.1258)	120	14899.54	0.200229
6	Walter Barclay, chamberlain (d.c.1193)	115	1387.588	0.61342
238	Malcolm, earl of Atholl (d.c.1197)	114	1283.844	0.629891
307	Robert of London (d.1225)	114	6930.382	0.500855

Table 7.9 reveals the top 20 witnesses by degree. As with the study of the whole kingdom (see Table 5.9), Duncan (II), earl of Fife (d. 1204) had the highest degree and eigenvector centrality. Indeed, his degree here (248) is only not much smaller than his degree in the larger dataset (277). The steward Walter son of Alan (I) (d. 1177), second in the degree table of all royal charters, falls to seventh place among the Scotland proper H1 documents. Andrew, bishop of Caithness (d. 1184), moves up from tenth place in Figure 5.9 to sixth place here. Richard de Moreville (d. 1189/90) fell from sixth place to tenth place. For the most part, however, actors like Matthew, bishop of Aberdeen; Philip de Valognes; William Comyn, earl of Buchan; William Hay; and Robert de Quincy occupied comparable or similar positions of importance in both networks. It is also useful to remark on the similarity between this dataset and the study of all Scotland proper witnesses, above. Earl Duncan and Bishop Matthew occupied the top two slots in terms of degree and eigenvector there as well.

In terms of the most productive co-witnessing ‘relationships’, Earl Duncan (II)’s unassailable position as a person of key significance is even more clearly obvious among Scotland proper royal documents than when look at SP documents more generally. Earl Duncan was part of eight of the pairs among the 19 involving 25 or more co-witnessing acts. From the previous generation, Walter Stewart (I) (d. 1177) witnessed 44 documents with the chancellor Nicholas (d. 1171). From the generation after Earl Duncan (II), William Comyn, earl of Buchan (d.1233) witnessed 28 times with William del Bois, chancellor (d.1232). This is the ‘latest relationship’ in time of all the pairs who witnessed together more than 20 times.

Table 7.10. Most productive co-witnessing ‘relationships’ (SP/H1)

Person 1	Person 2	#docs
Duncan (II), earl of Fife (d.1204)	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	49
Duncan (II), earl of Fife (d.1204)	William Hay (I), lord of Errol (d.c.1201)	46
Walter Stewart (I), son of Alan (d.1177)	Nicholas of Roxburgh, chancellor (d.1171?)	44
Duncan (II), earl of Fife (d.1204)	Matthew, bishop of Aberdeen (d.1199)	40
William Hay (I), lord of Errol (d.c.1201)	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	32
Duncan (II), earl of Fife (d.1204)	Walter Barclay, chamberlain (d.c.1193)	29
William Comyn, earl of Buchan (d.1233)	William del Bois, chancellor (d.1232)	28
William Hay (I), lord of Errol (d.c.1201)	Gilbert or Gilla Brigte, earl of Strathearn (d.1223)	28
William Comyn, earl of Buchan (d.1233)	William Hay (I), lord of Errol (d.c.1201)	27
Richard de Moreville (d.1189 or 1190)	Walter Stewart (I), son of Alan (d.1177)	27
Matthew, bishop of Aberdeen (d.1199)	Andrew, bishop of Caithness (d.1184)	27
Nicholas of Roxburgh, chancellor (d.1171?)	Andrew, bishop of Caithness (d.1184)	27

Duncan (II), earl of Fife (d.1204)	William Comyn, earl of Buchan (d.1233)	26
Duncan (II), earl of Fife (d.1204)	Richard de Moreville (d.1189 or 1190)	26
Duncan (II), earl of Fife (d.1204)	Andrew, bishop of Caithness (d.1184)	25
Duncan (II), earl of Fife (d.1204)	Hugh of Roxburgh, bishop-elect of Glasgow (d.1199)	25
Philip de Valognes, chamberlain (d.1215)	William Hay (I), lord of Errol (d.c.1201)	25
Matthew, bishop of Aberdeen (d.1199)	Walter Stewart (I), son of Alan (d.1177)	25
Walter Stewart (I), son of Alan (d.1177)	Ingram, bishop of Glasgow (d.1174)	25
Philip de Valognes, chamberlain (d.1215)	William Comyn, earl of Buchan (d.1233)	24
Walter Stewart (I), son of Alan (d.1177)	Andrew, bishop of Caithness (d.1184)	24
Nicholas of Roxburgh, chancellor (d.1171?)	David Oliphant (12C)	24
William Comyn, earl of Buchan (d.1233)	Malcolm (I), earl of Fife (d.1229)	23
Duncan (II), earl of Fife (d.1204)	Philip de Valognes, chamberlain (d.1215)	22
Matthew, bishop of Aberdeen (d.1199)	Ness, son of William, lord of Leuchars (d.1178x83)	22
Duncan (II), earl of Fife (d.1204)	Richard de Prebenda, bishop of Dunkeld (d.1210)	21
Duncan (II), earl of Fife (d.1204)	Malcolm (I), earl of Fife (d.1229)	21
Richard de Moreville (d.1189 or 1190)	Matthew, bishop of Aberdeen (d.1199)	21
Richard de Moreville (d.1189 or 1190)	Nicholas of Roxburgh, chancellor (d.1171?)	21
Matthew, bishop of Aberdeen (d.1199)	Nicholas of Roxburgh, chancellor (d.1171?)	21

Figure 7.23. Netdraw: witnesses to SP/H1 documents, >5 co-witnessing instances

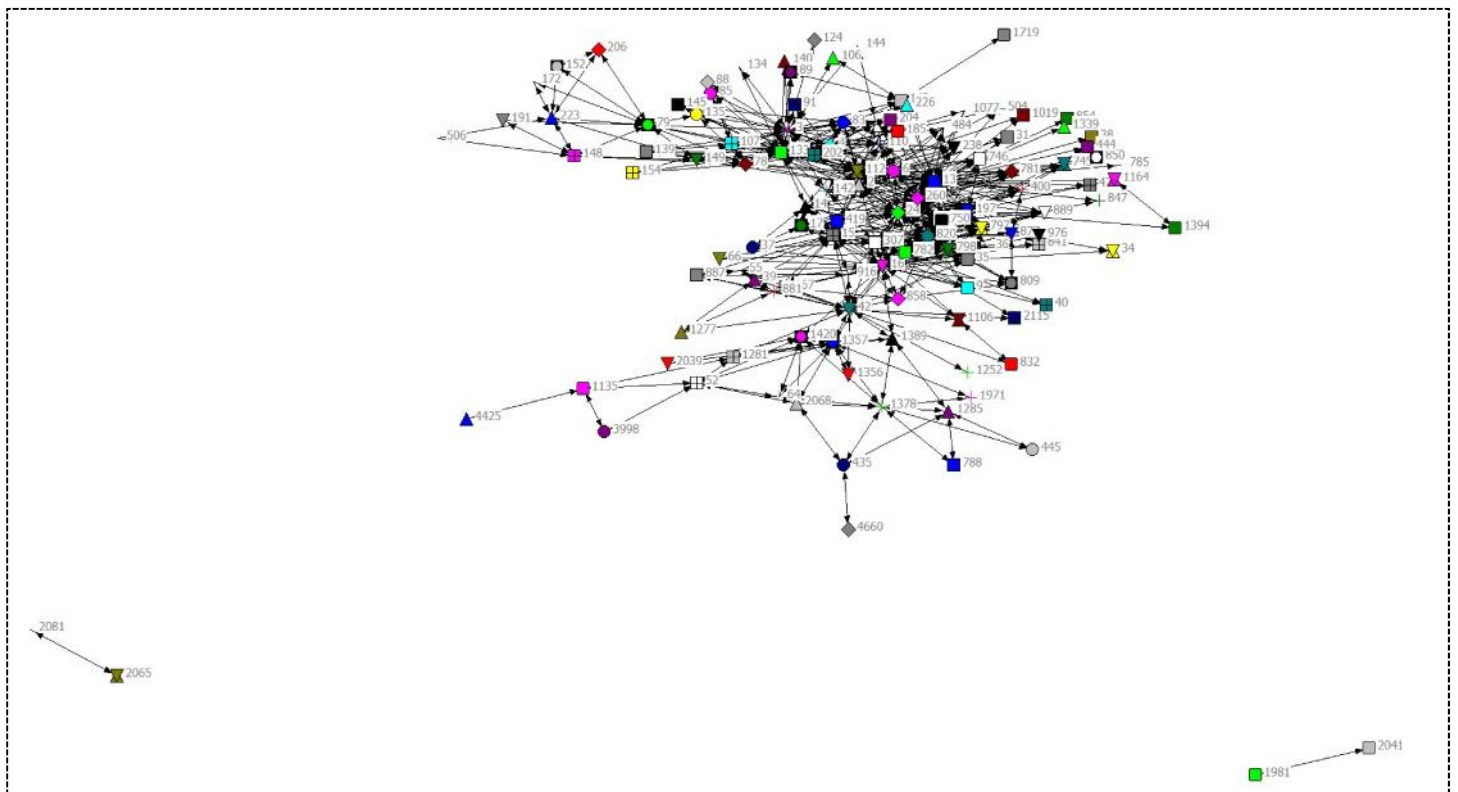


Figure 7.24. Netdraw: witnesses to SP/H1 documents, > 10 co-witnessing instances

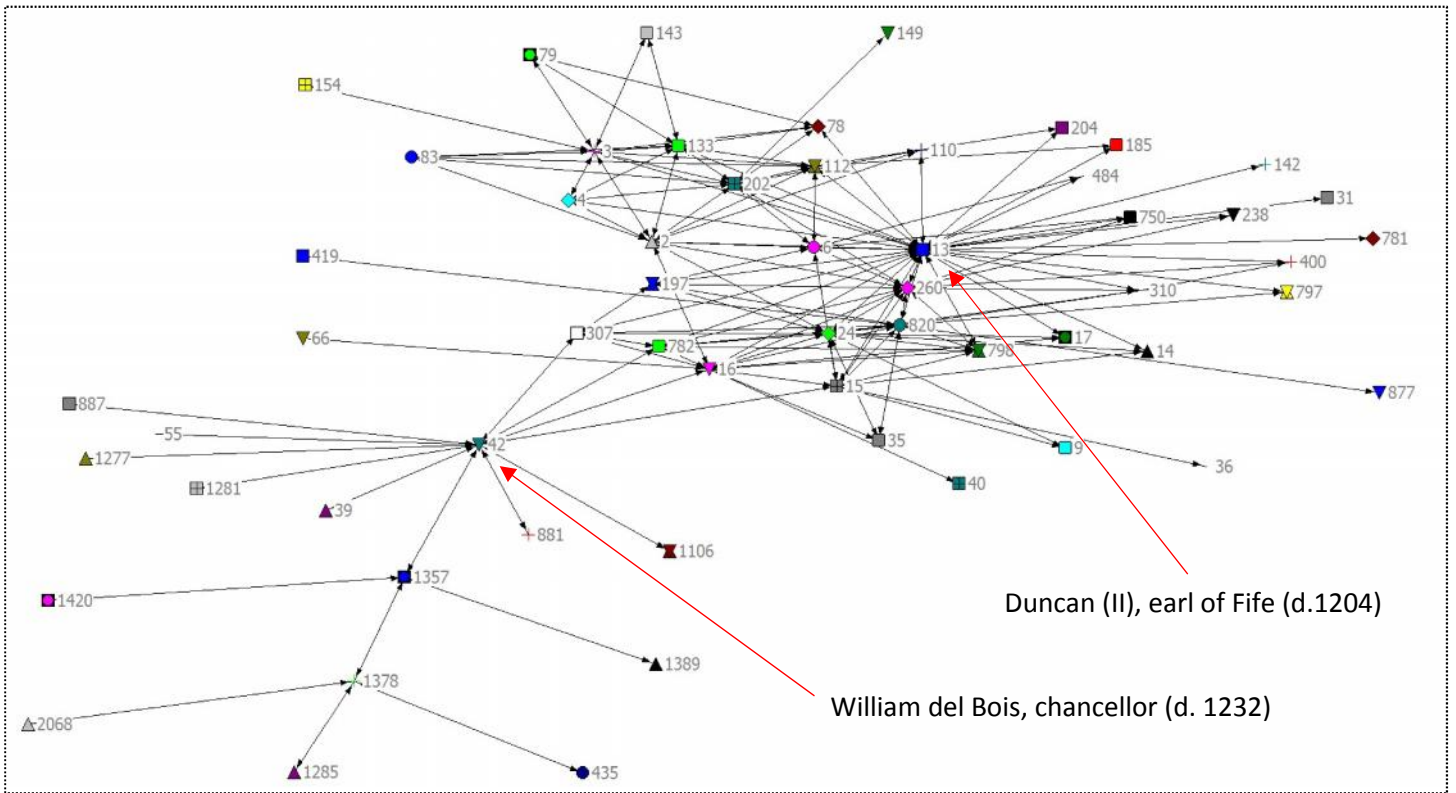


Figure 7.25. Netdraw: witnesses to SP/H1 documents, > 20 co-witnessing instances

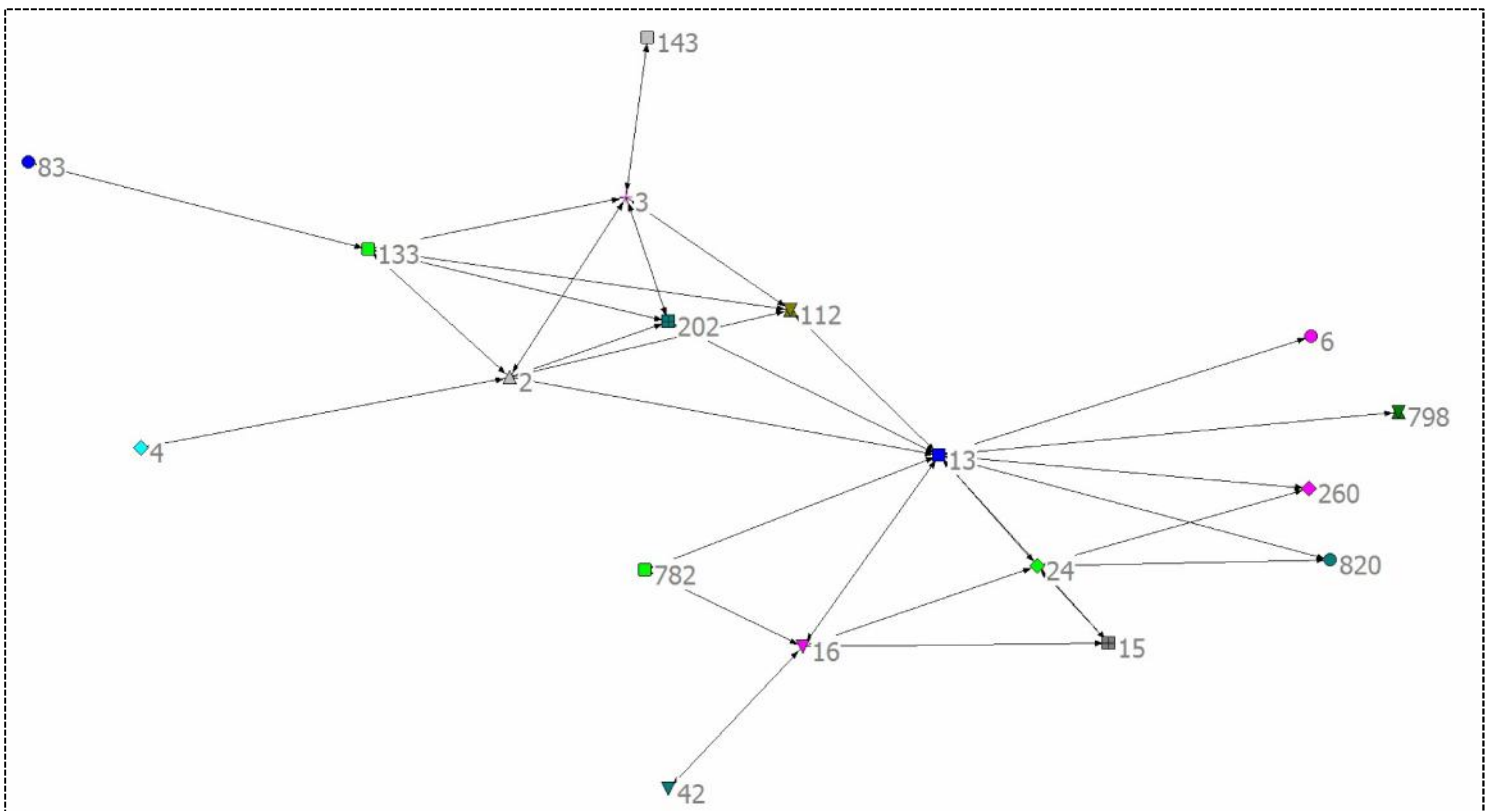


Figure 7.26. Netdraw: witnesses to SP/H1 documents, >25 co-witnessing instances

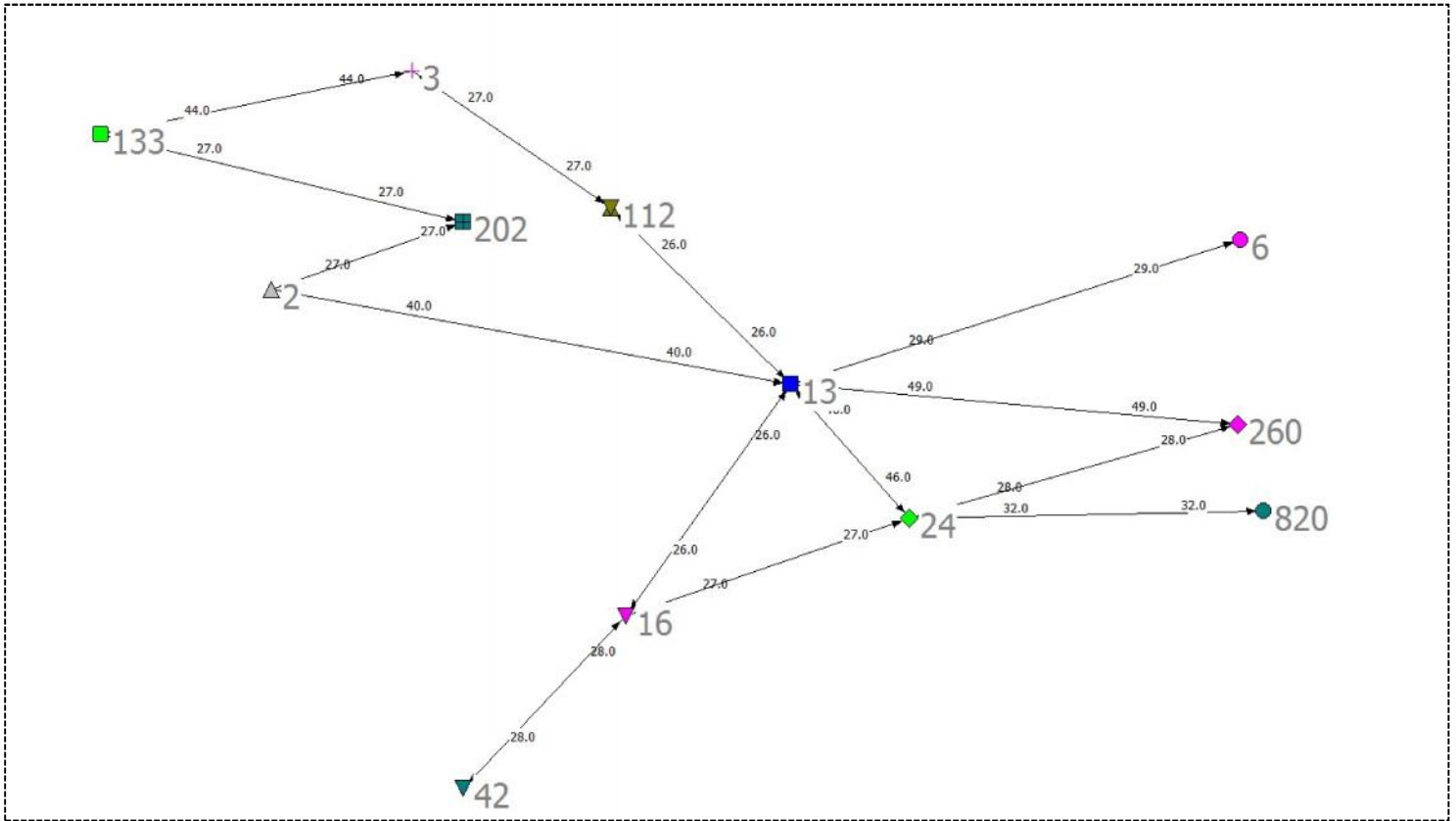
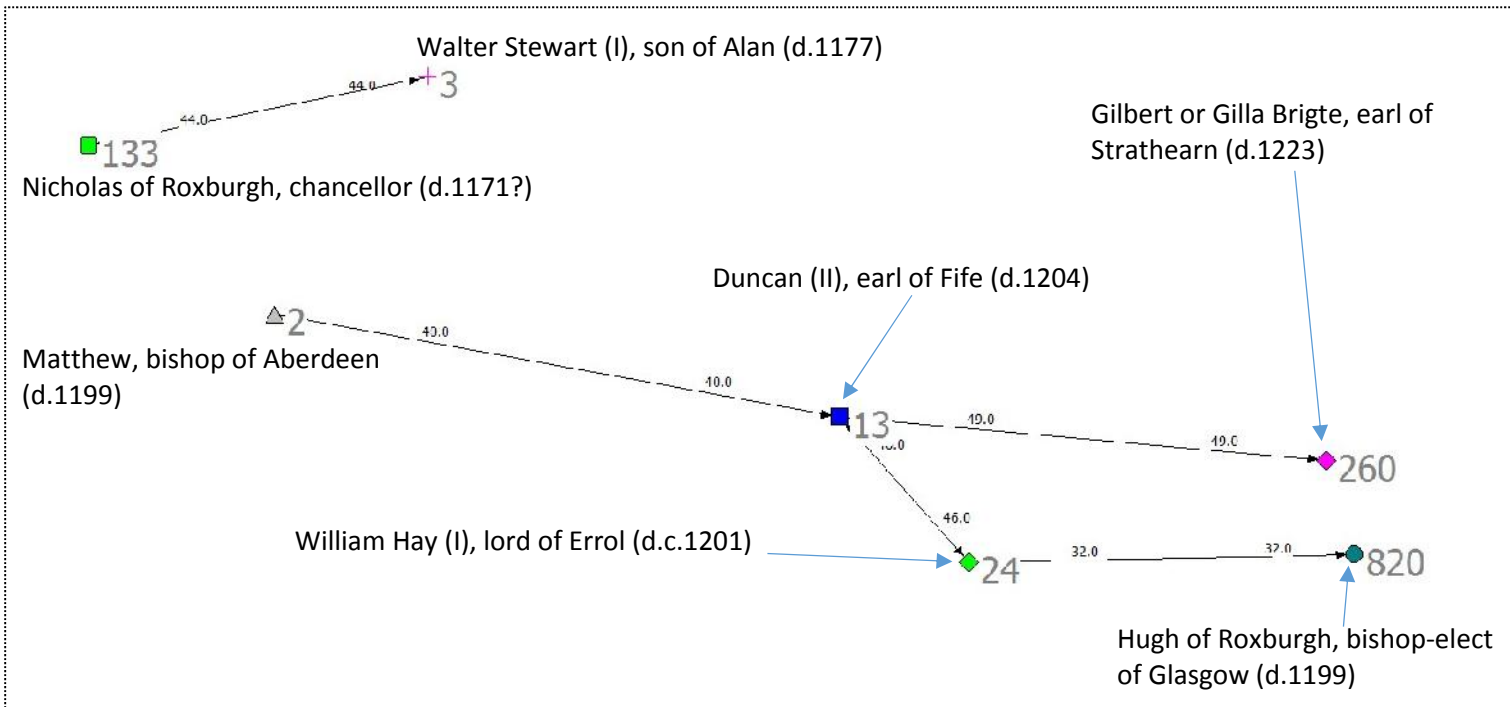


Figure 7.27. Netdraw: witnesses to SP/H1 documents, >30 co-witnessing instances



Scotland proper dataset, witnesses to ecclesiastical documents (H2)

The Social Network Analysis of all ecclesiastical documents (H2) in the Scotland proper dataset includes 343 documents, of which 338 are charters and 5 are notifications. The study comprises 1065 witnesses, none of whom were women, and 10845 edges.

The table of centrality figures shows the predominance of the episcopal church of St Andrews, and as such bears comparison with the study of all witnesses to H2 documents in the previous chapter. Indeed, Matthew, bishop of Aberdeen (d. 1199) had the highest centrality in terms of degree and eigenvector, just as in the larger study. The position of Duncan (II), earl of Fife (d. 1204), was more central in the Scotland proper study than the study for the whole kingdom, in that he moved from seventh place in degree up to second place, and from third in eigenvector (86.7%) up to second place (94.9%). While the vast majority of the most central players in this study were personnel of the church of St Andrews, it is also noteworthy that archdeacons of Aberdeen and Dunkeld appear below.

Table 7.11. Centrality: Top 20 witnesses by degree

PoMS ID	Person	Degree	Between	Eigenvector
2	Matthew, bishop of Aberdeen (d.1199)	190	41453.66	1
829	Ranulf de Wat, archdeacon of St Andrews (d.1209)	150	29726.78	0.726505
13	Duncan (II), earl of Fife (d.1204)	149	29742.44	0.949179
3016	Alexander, chaplain of bishops of St Andrews (12C)	134	17691.96	0.698584
411	Andrew, archdeacon of Lothian (fl.1147×59-1178×84)	119	3888.976	0.787905
862	Herbert Scott, master, clerk (fl.1144×59-1172×78)	116	2753.319	0.729274
850	John Scott, bishop of Dunkeld (d.1203)	113	10548.01	0.718644
271	Robert, son of Saewulf, bishop's chancellor	107	2697.556	0.712188
493	John of Leicester, bishop of Dunkeld (d.1214)	106	9549.439	0.563483
865	Simon, archdeacon of Aberdeen (fl.1189×96-1202×03)	101	13934.76	0.513235
863	Isaac Scott, master, clerk	96	6769.027	0.478635
2762	Henry, archdeacon of Dunkeld (fl.1183×1203-1220×25)	96	23116.89	0.132771
165	Aiulf, dean of Lothian (fl.1150/51-1186)	94	1623.319	0.652766
821	Walter of Roxburgh, archdeacon of St Andrews (fl.1165×72-1179×88)	92	10813.16	0.469978
770	William of Hailes, master, dean of St Andrews (fl.1189×98)	92	5233.508	0.543874
2483	Gamel, doorward, master (St Andrews)	92	7895.863	0.519511
1022	Odo of Kinninmonth, steward, marischal (d.c.1195)	91	4224.169	0.603626
256	Walter, prior of St Andrews (fl.1160-1198×99)	91	5618.928	0.595782
474	Guy, abbot of Lindores (d.1219)	90	12625.5	0.440191
2978	Stephen, clerk (St Andrews)	88	1730.24	0.678106

The most productive co-witnessing 'relationships' in the study of witnesses to H2 documents in the Scotland proper dataset were also representative of the importance of the church of St Andrews and the production and survival of episcopal documents there. As such, it bears much resemblance to the equivalent chart among witnesses for the whole kingdom. Much of the diocese of St Andrews was south of the Firth of Forth, however, and charters of the bishops of St Andrews dealing with the southern part of the diocese were not included in the Scotland proper dataset, which is responsible for the differences between the two studies. The archdeacon of St Andrews Laurence of Thornton appears as much more significant in this study, and he was involved in six of the pairs in the table. Indeed, the time of Bishop William Malveisin (1202-38) is better represented in this dataset, in relative terms, with figures like Peter the chaplain and clerk, Master Michael, the chaplain and clerk, Simon de Noisy the clerk, and Master Stephen of Lilliesleaf registering in more prominent positions.

Table 7.12. Most productive co-witnessing 'relationships' (SP/H2)

Person1	Person2	#docs
Matthew, bishop of Aberdeen (d.1199)	Herbert Scott, master, clerk (fl.1144x59-1172x78)	24
Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	Peter, chaplain and clerk of Bishop Malveisin	21
Michael, master, clerk, chaplain (fl.1201-1220x25)	Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	20
Michael, master, clerk, chaplain (fl.1201-1220x25)	Peter, chaplain and clerk of Bishop Malveisin	20
Peter, chaplain and clerk of Bishop Malveisin	Stephen of Lilliesleaf, master, clerk, persona	20
Walter of Roxburgh, archdeacon of St Andrews (fl.1165x72-1179x88)	Alexander, chaplain of bishops of St Andrews (12C)	19
Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	Edward Murray, master, canon, bishop's clerk	19
Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	Simon de Noisy, clerk of Bishop William of St Andrews	19
Robert, son of Saewulf, bishop's chancellor	Alexander, chaplain of bishops of St Andrews (12C)	18
Michael, master, clerk, chaplain (fl.1201-1220x25)	Stephen of Lilliesleaf, master, clerk, persona	18
Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	Stephen of Lilliesleaf, master, clerk, persona	18
Laurence of Thornton, archdeacon of St Andrews (d.1238x40)	William of Gullane, rector of Gullane	18
Peter, chaplain and clerk of Bishop Malveisin	Edward Murray, master, canon, bishop's clerk	18
William of Gullane, rector of Gullane	Simon de Noisy, clerk of Bishop William of St Andrews	18

Figure 7.28. Netdraw: witnesses to SP/H2 documents, >5 co-witnessing instances

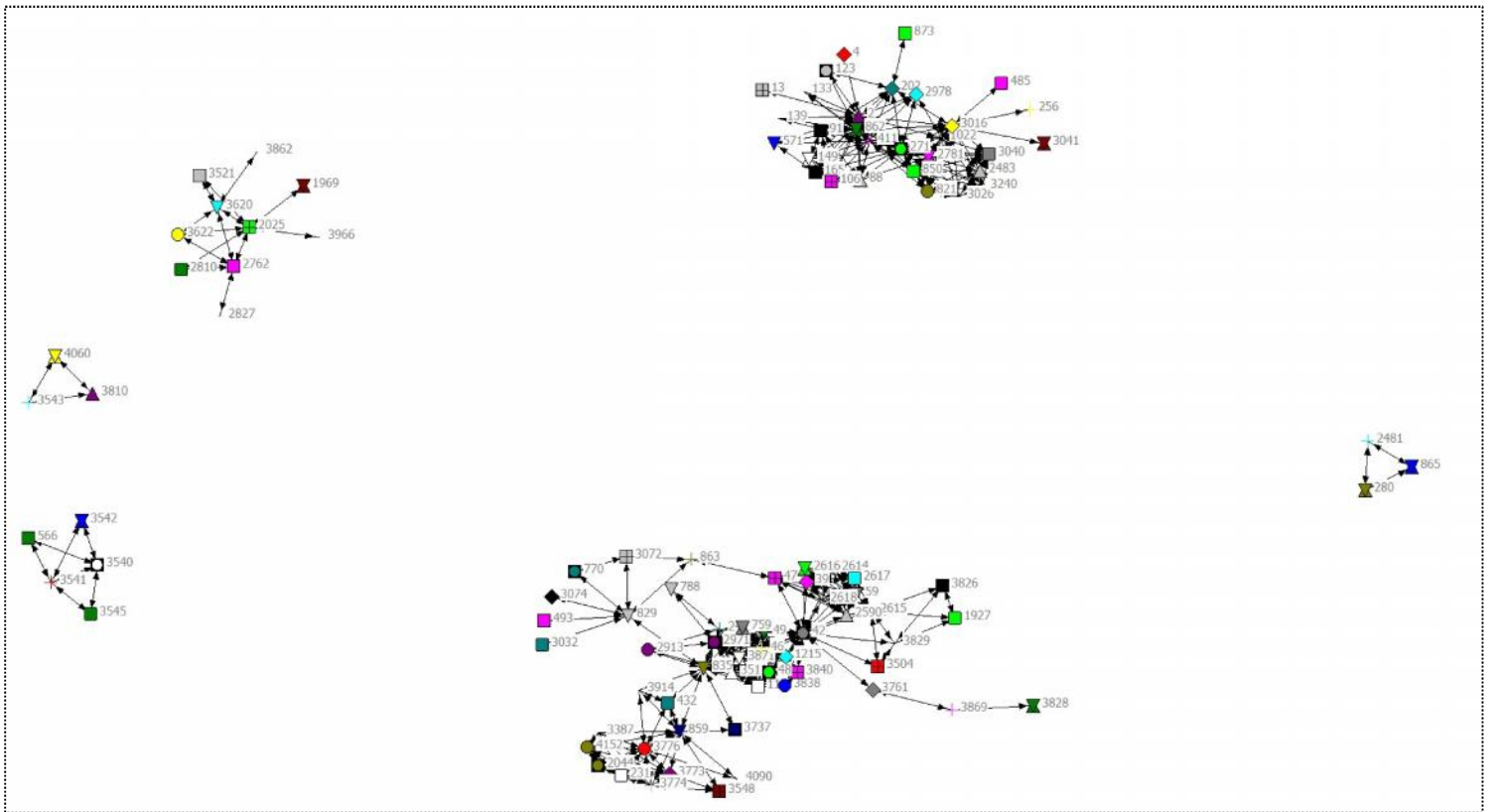


Figure 7.29. Netdraw: witnesses to SP/H2 documents, >10 co-witnessing instances

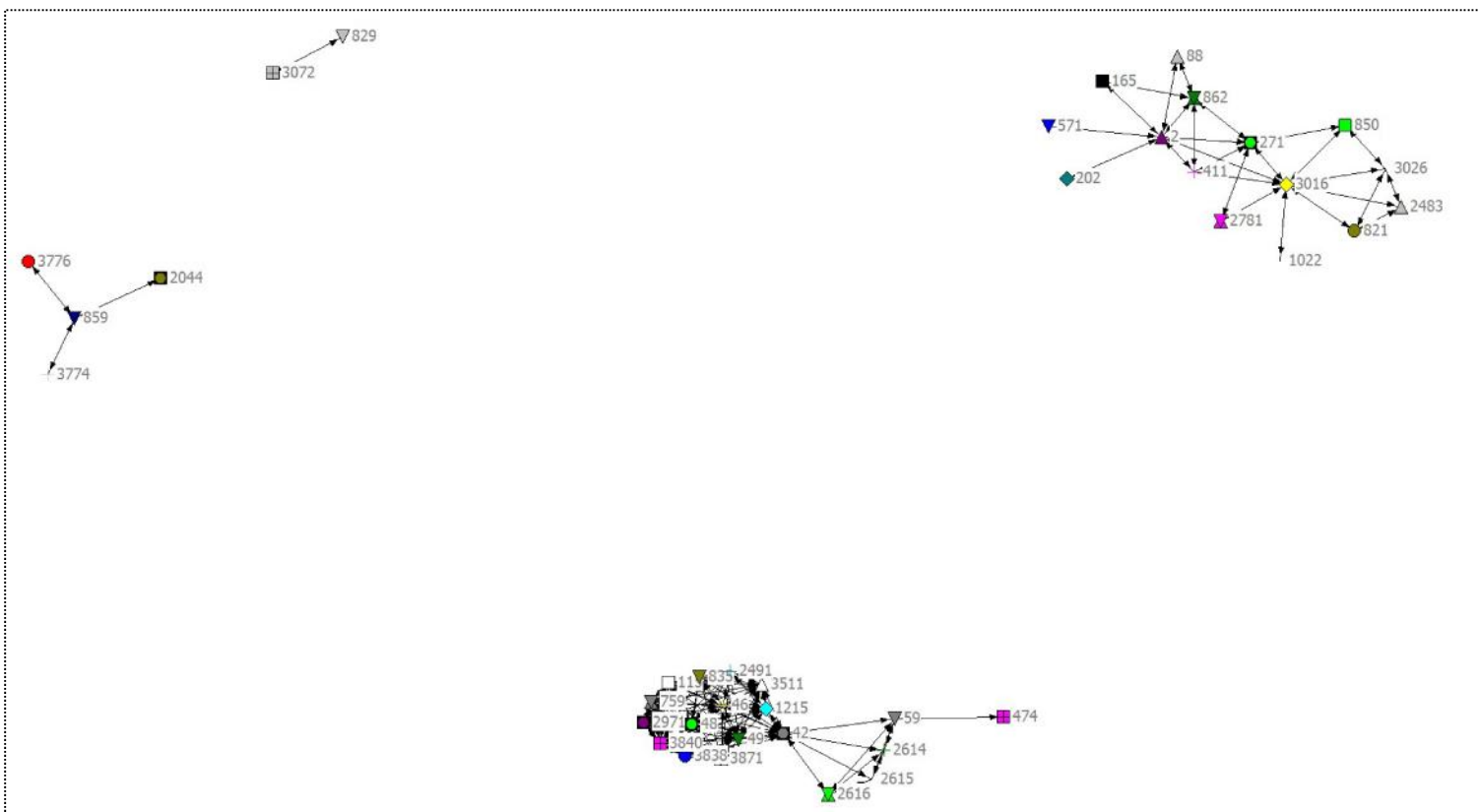


Figure 7.30. Netdraw: witnesses to SP/H2 documents, >15 co-witnessing instances

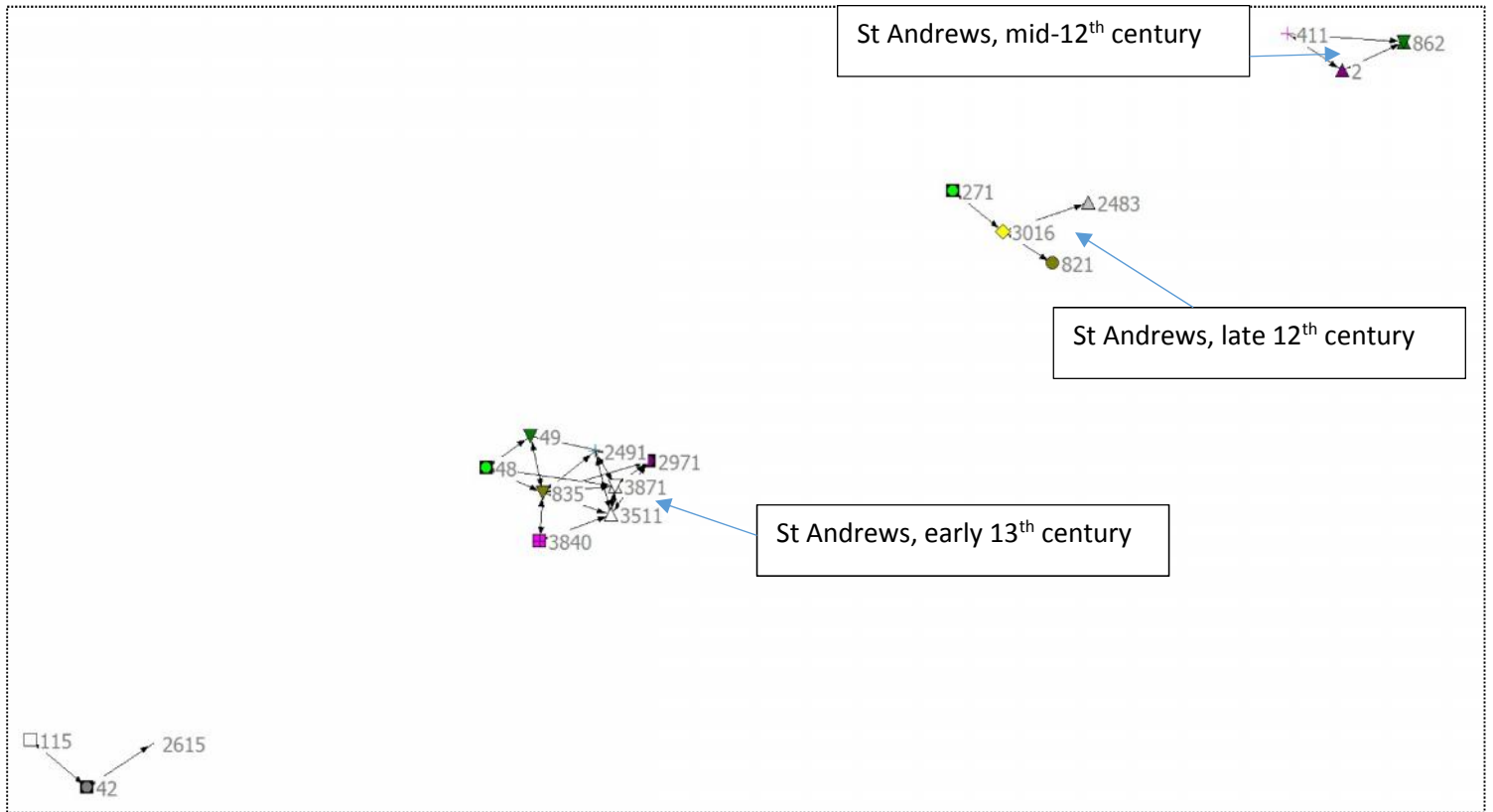
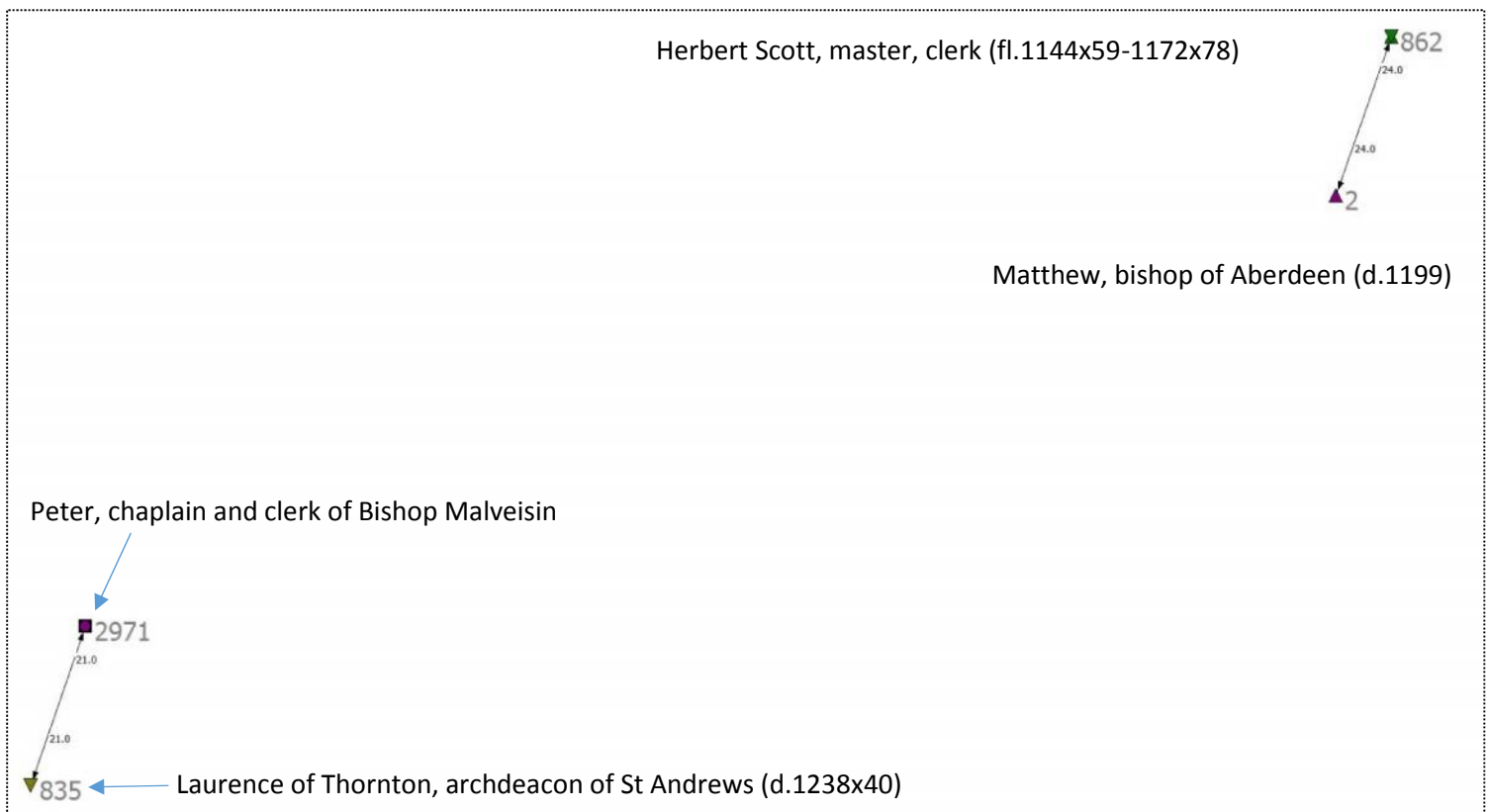


Figure 7.31. Netdraw: witnesses to SP/H2 documents, >20 co-witnessing instances



The sociograms of the Scotland proper study of H2 witnesses also bear comparison to the graphs of all H2 witnesses for the whole kingdom. We see the existence of separate segments of witnesses at relatively low levels of co-witnessing, and at the level of more than 15 co-witnessing instances, nearly all of the witnesses in the network were attached to the church of St Andrews, with the divisions between the segments being based on three distinct chronological periods, from the mid-twelfth century through to the mid-thirteenth century. Representing the later period, the archdeacon Laurence of Thornton co-witnessed with Peter the chaplain and clerk 21 times, and representing the earlier period, Matthew, bishop of Aberdeen, and archdeacon of St Andrews from ca 1150 to 1172, co-witnessed with Master Herbert Scot, the clerk, a total of 24 times.

Scotland proper dataset, witnesses to lay or private documents (H3)

The study of lay or private charters (H3) in the Scotland proper dataset comprises 613 documents, only about a third of all such documents in the database. Of these, 608 were charters, 2 were charter/brieves, and three were notifications. There were 2626 witnesses to these documents, and 22,322 edges in the social network. Of the witnesses, 18 were women.

Table 7.13. Centrality: top 25 witnesses by degree

PoMS ID	Person	Degree	Betweenness Centrality	Eigenvector Centrality
13	Duncan (II), earl of Fife (d.1204)	228	211635.7	1
782	Malcolm (I), earl of Fife (d.1229)	153	95702.18	0.797241
42	William del Bois, chancellor (d.1232)	152	147663.5	0.559057
1802	William Wascelin, knight	133	62031.37	0.587609
66	David Hay, lord of Errol (d.1237×41)	130	116738.6	0.569724
5330	Henry, son of Geoffrey de Liberatione of Perth	125	154566.6	0.469267
2	Matthew, bishop of Aberdeen (d.1199)	124	37646.57	0.558863
64	Henry of Stirling, son of Earl David	122	85404.83	0.35613
15	Philip de Valognes, chamberlain (d.1215)	121	45776.25	0.702431
40	William Malveisin, bishop of St Andrews (d.1238)	120	136587	0.496282
1389	John Hay (I), lord of Naughton (d.×Oct.1266)	120	167251.9	0.340937
3023	Adam of Kilconquhar, brother of Earl Duncan (father of Duncan)	120	43096.87	0.452026
1285	Walter Oliphant, justiciar of Lothian (son of Walter) (d.1242)	115	73481.37	0.607322

260	Gilbert or Gilla Brigitte, earl of Strathearn (d.1223)	114	45637.14	0.683936
2067	Gilbert Hay (I), lord of Errol (d.1263) (son of David)	113	134957.6	0.257294
16	William Comyn, earl of Buchan (d.1233)	112	32608.14	0.734006
1233	Philip Melville, justiciar of Scotia	111	101927.4	0.342594
5364	John Cameron, sheriff of Perth	108	120904.4	0.198633
142	David, earl of Huntingdon (d.1219)	106	47010.21	0.48502
2190	Robert Mowat, knight, justiciar, sheriff of Forfar	105	116138	0.190034
1326	Duncan, son of Earl Duncan (II) of Fife	100	41428.49	0.416404
1805	Walkelin, son of Stephen	97	24009.76	0.503629
1	William I, king of Scots (d.1214)	95	19142.03	0.570169
1981	Alexander Comyn, earl of Buchan (d.1289)	90	72429.12	0.192259
5808	Ralph de Lascelles, knight	90	80618.15	0.145053

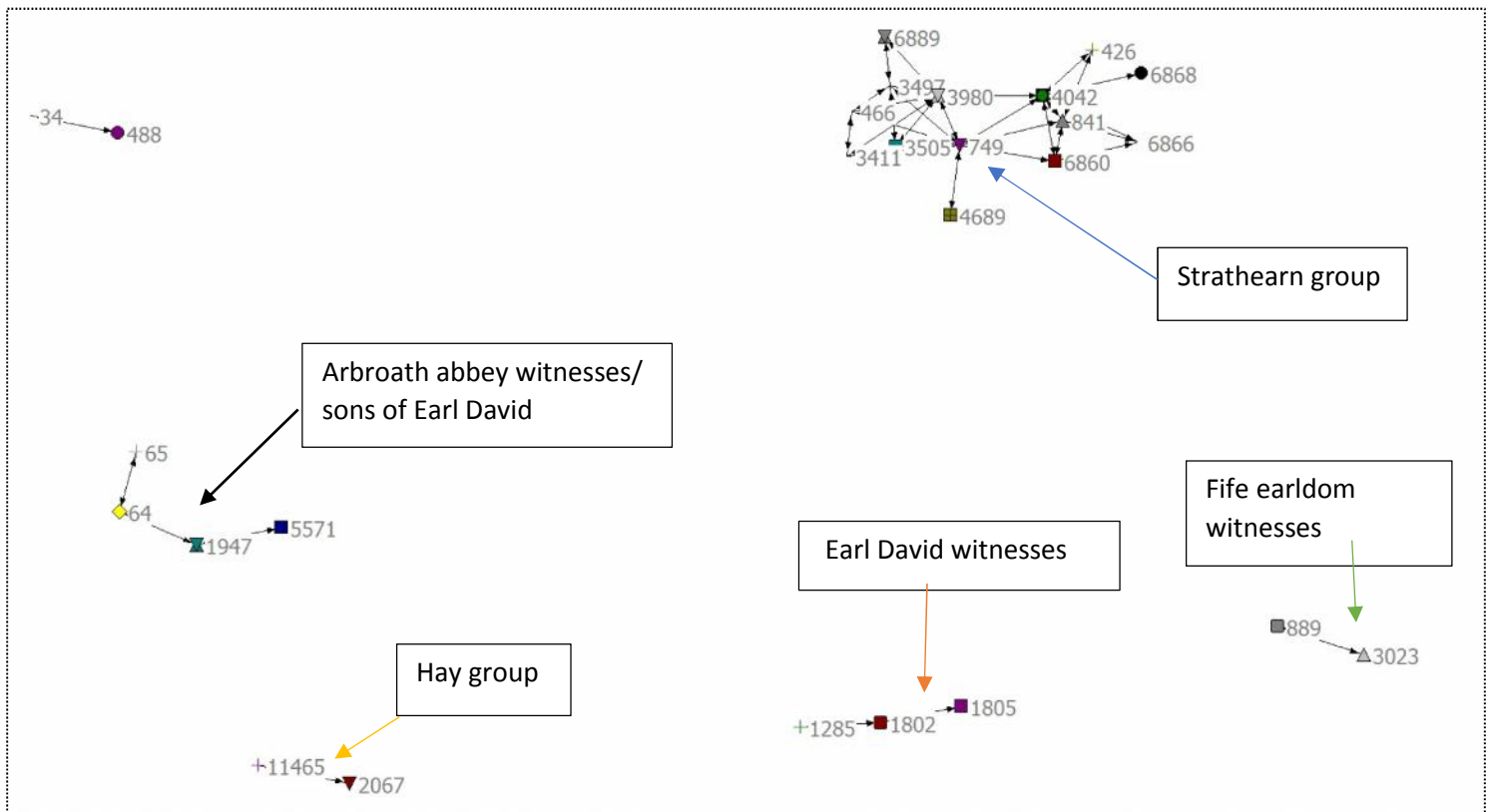
As in the study of witnesses to all H3 documents, Duncan (II), earl of Fife (d.1204) has the highest centrality in all three measurements – degree, betweenness, and centrality. His position among Scotland proper documents is unassailable. With 228 contacts, he had 75 more than the person with the next highest degree, his son Malcolm (I), earl of Fife (d.1229). Earl Malcolm also comes in the second slot in eigenvector, but his score is only 79.7% that of his father. The third, fourth, and fifth slots according to eigenvector were occupied by William Comyn, earl of Buchan (d.1233), Philip de Valognes, chamberlain (d.1215), and Gilbert or Gilla Brigitte, earl of Strathearn (d.1223), respectively. All of these men were prominent actors in the networks of royal charter witnesses, as explored in chapter 5, above. Of the most central witnesses, some can be associated with [142] David earl of Huntingdon, including his household knight, [1802] William Wascelin, his son [64] Henry of Stirling, and his vassal [1805] Walkelin son of Stephen. Others were associated with the aforementioned earls of Fife, namely Earl Duncan's brother [3023] Adam of Kilconquhar and Earl Duncan's son [1326] Duncan. The Hay family were also prominent figures, particularly [66] David, [1389] John, and [2067] Gilbert. Finally, the prominence of a number of justiciars and sheriffs is noteworthy.

Table 7.14. Most productive co-witnessing 'relationships' (SP/H3)

Person 1	Person 2	#docs
Abraham, bishop of Dunblane (fl.1210x14-1220x25)	Malise, son of Gilla na Naem, steward of earls of Strathearn	17
Abraham, bishop of Dunblane (fl.1210x14-1220x25)	Brice, persona of Crieff	14
Robert, earl of Strathearn (1223-45)	Malise, son of Gilla na Naem, steward of earls of Strathearn	12
Abraham, bishop of Dunblane (fl.1210x14-1220x25)	Gilbert, archdeacon of Dunblane (fl.1203x10-1235x39)	12
Malise, son of Gilla na Naem, steward of earls of Strathearn	Brice, persona of Crieff	12
William Wascelin, knight	Walkelin, son of Stephen	11
Robert, earl of Strathearn (1223-45)	Abraham, bishop of Dunblane (fl.1210x14-1220x25)	11
Malise, son of Gilla na Naem, steward of earls of Strathearn	Gilbert, archdeacon of Dunblane (fl.1203x10-1235x39)	11
Malise, son of Ferteth earl of Strathearn (d.a.1214)	Gilla na Naem, steward of Earl Gilbert	10
Malise, son of Ferteth earl of Strathearn (d.a.1214)	Constantine, judex (PER)	10
Fergus, son of Gilbert, earl of Strathearn (d.c.1247)	Abraham, bishop of Dunblane (fl.1210x14-1220x25)	10
Malise, son of Gilla na Naem, steward of earls of Strathearn	Malise, son of Earl Gilbert of Strathearn (d.c.1272)	10

As we saw in the previous chapter, the Coldingham corpus of documents caused the H3 study to be dominated by minor landholders from Berwickshire, at least in terms of those who witnessed most frequently. These charters, of course, do not appear in the Scotland proper dataset. As Table 7.14 demonstrates, the richest seam of lay charters north of Forth deal with the province and earldom of Strathearn. As such, the points to be made here will resemble closely the case study of the charters of the earls of Strathearn laid out in the previous chapter. Bishop Abraham and Archdeacon Gilbert of Dunblane appear here, along with various close relatives and stewards of the earls of Strathearn. The only exception to this is the fact that William Wascelin and Walkelin son of Stephen co-witnessed 11 times. This should be seen in the context of the charters of David earl of Huntingdon.

Figure 7.34. Netdraw: witnesses to SP/H3 documents, >7 co-witnessing instances



The social networks of witnesses to H3 documents in the Scotland proper dataset are fairly thoroughly interconnected at the level of more than three co-witnessing acts, but break down into multiple segments by the level of more than five instances. As Figure 7.34 shows, the segment associated with the earldom of Strathearn is the most populous, but there are still a few other groups comprising mostly people associated with David earl of Huntingdon, the earls of Fife, or the Hay family. Figure 7.34 shows the seven individuals who witnessed together more than 10 times. This includes three triads, including five individuals were active in Strathearn in the early to mid-thirteenth century, as well as a dyad of two vassals of Earl David.

Figure 7.35. Netdraw: witnesses to SP/H3 documents, > 10 co-witnessing instances

