A THREE-STRANDED CORD WILL NOT QUICKLY BE BROKEN: AN EXPLORATORY SOCIAL NETWORK ANALYSIS OF A COLLEGE JEWISH COMMUNITY

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Abstract

Using social network analysis methods and social capital theory, this study introduces quantitative frameworks for understanding the strength of community, specifically for a college campus Jewish organization. The organization's primary institutionalized mode of measuring success is attendance counts. Through key informant interviews and collaboration with community staff-research partners, we designed and disseminated a community-wide survey (n=172). This study engages in an exploratory data analysis of survey data (factor analysis, social network analysis, multiple regression) and offers data-driven recommendations for continuing to build a robust community that positively impacts student members. For key measures of interest, connection to an influential actor in the community proves to be more important than well-connected networks. Social capital arises as a more comprehensive predictor for a positive experience than attendance or other hypothesized factors.

Acknowledgements

This project was borne out of the initiative taken by staff at Slifka Center. Thank you to Rabbi Jason Rubenstein and Rabbinic Intern, Emmanuel Cantor for your guidance and driving passion for this project. Real people and real relationships cannot be reduced to data points; and our Slifka research partners' experience was crucial throughout the research process. I'd like to extend my sincere thanks to my senior project advisor, Professor Joshua Kalla, for his guidance in methodology and insightful suggestions. Special thanks to Kelsey Gabriel whom I had a great pleasure working with for the past seven months. Lastly, in wonder and reverence, we acknowledge our God whose glory will fill the earth and all its relational networks.

Content

1 Introduction

> *Two are better than one, because they have a good reward for their toil. For if they fall, one will lift up his fellow. But woe to him who is alone when he falls and has not another to lift him up!*
>
> – *Ecclesiastes, Kohelet 4:9-10*

Finding a sense of community is one of the most important components of a college experience. Social capital is a way of understanding the value of relational networks in communities. Students' networks are conduits for emotional support, academic guidance, recreational enjoyment, and valuable information in an unfamiliar environment. The expansive literature on networks and social capital has established their importance in a variety of domains. For college settings, Social capital is gained through relationships with friends, family, faculty, staff, and college support services (Sandoval-Lucero, Maes, and Klingsmith 2014). Building social capital in college has especially pertinent implications for marginalized students such as low-income students, racial and ethnic minorities, and first-generation students (Moschetti and Hudley 2014).

Religious and cultural organizations are also a well-studied locus for social capital. Religious involvement is conducive for building young adults' social networks with benefits in other areas of life. Integration into a college religious community facilitates integration into the school's community at large and positively impacts school outcomes (Glanville, Sikkink, and Hernández).

This study applies social network methods and a social capital framework to understand a specific college Jewish community and build a precedent for new methods of measuring organizational success.

The Joseph Slifka Center is the "central hub" for Jewish life at Yale. Core to the Center's mission is fostering a community in which students can engage with and explore their Jewishness. To do this, Slifka manages an array of programs such as spiritual guidance, dining, arts and culture, social justice, language classes, and travel to Israel.

Slifka's conventional quality assessment and improvement method involves counting the number of staff-student encounters. For instance, when a Rabbi gets coffee with a first-year, they log that encounter into a centralized system. According to Hillel International, an umbrella organization for Jewish campus organizations, six encounters is the optimal number for a student to have a meaningful involvement in the organization. Herein lies the motivating issue for this project. Slifka staff would like to

discern the characteristics of Slifka's community beyond this conventional approach in order to develop more effective ways of understanding meaningful involvement.

Staff and students at Slifka have rich, valuable insight on the nature of their community, but largely within their own relational vicinities. This project is an exploratory data analysis approach to understand the Slifka community from a birds-eye-view. The main research question is: What constitutes a meaningful Slifka experience? Two interrogative strands of this question are: (1) Who is connected to whom (social network) and (2) Who feels efficacious (social capital)? In SECTION 3. SOCIAL NETWORK, we examine the characteristics of Slifka's relational network. In SECTION 4. DISCUSSION, we explore components of Slifka's community that are important for a positive, meaningful student experience. This exploratory data analysis section also attempts to answer other questions of interests. All of these findings lead into suggestions for continuing to foster a robust community in which students can experience a positive impact on their Jewishness.

2 Methods

2.1 Survey design

Survey design began with key informant (KI) interviews in order to determine priorities for the survey and the research project at large. Our purposive sampling method seeked to gain diverse opinions from multiple parts of Slifka. KIs were selected based on the nominations of the main Slifka research partner. Participants (four staff members and one student) were recruited through email. Individual, semi-structured qualitative interviews were conducted between November 2020 and December 2020 (See APPENDIX 2 for interview guides). The semi-structured approach allowed us to probe on topics that the respondents brought up as well as iterate as we progressed through the KIs. Interviews covered themes such as organizational goals, philosophies on community-building; and equity, belonging and inclusivity.

The interviews were followed by an initial drafting of a full survey in January 2021. During February 2021, we sent the draft to our Slifka research partners and KI's and fielded their input to revise the survey questions. We also discussed the survey design in meetings with the research partners.

The final survey was created on Qualtrics (Qualtrics, Provo, UT). Participation included a drawing for one of six $36.00 gift cards to Atticus Bookstore/Cafe decided in consultation with our KIs and research partners.

2.1.1 Survey sections

The survey was comprised of five sections:

(1) Social Network

These questions are designed to uncover the social network of the community (Paluck, Shepherd, and Aronow 2015). We limited respondents to five nominations for each of the two questions because higher counts are shown to generate redundant links and weaken the variances (Yang et al. 2009). Two to three names are shown to be sufficient for a stable structure and each additional name adds burden for the respondent (Paik and Sanchagrin 2013). But given that this is the first section on the survey as well as the preferences of our Slifka research partners, we decided to set the limit at five.

(2) Social Capital

Social capital is measured through questions on external political efficacy (Craig, Neimi, and Silver 1990). Question #: *People like me don't have any say about what Slifka does.* This question assesses organizational responsiveness to members' demands (Craig et al. 1990). A second question

on efficacy was added through input from our Slifka research partners. Question #: *If I had an idea for a Slifka event, I could easily turn it into a real, publicized event.*

(3) Slifka Involvement

We worked with our Slifka research partners to develop four questions to measure involvement in Slifka. Attendance statistics were gathered from Slifka's internal database (Salesforce, San Francisco, US) and merged with survey data. The data contains attendance data for any attendee at a Slifka-affiliated event from July 1, 2020 to June 30, 2021. For every member of Slifka, the database records basic information and the name of each engagement they participated in.

(4) Demographics

Demographic questions are collected to answer questions of diversity in Slifka's social network.

(5) Jewish Identity

Jewish identity questions were drawn from the American Jewish Identity Survey (2001). One of our KI interviews revealed the importance of Slifka's influence on students' trajectories after graduation. This helped us draft Question 37. Discussions with Slifka research partners helped us refine wording and answer choices to ensure validity and relevance.

2.2 Data collection

Data collection began on February 23, 2021. The survey was distributed by our research partner to Slifka's five main mailing lists. Student-facing Slifka staff were also asked to promote the survey in their conversations. This was followed by promotion on Slifka's social media channels. For the next month, we tracked the responses and identified specific subgroups that had low participation rates for targeted outreach.

2.2.1 Data privacy

The following text was displayed to explain our data use:

> While this survey is not anonymous, all answers will be kept strictly confidential; we understand that some of the questions may be sensitive and commit to maintaining your privacy. The individuals who will have access to this survey's responses are the project organizers: Emmanuel Cantor (Rabbinic Intern), Professor Josh Kalla (Political Science), Rabbi Jason Rubenstein, and student researchers Kelsey Gabriel '22 and John Park '21. Anonymized results

will be used for academic purposes and quality improvement purposes. When analyzing this survey, we may also use other Slifka data, such as information on event attendance.

2.2.2 Additions

Six new questions were appended to the survey on February 25, 2021. The 62 respondents who had already completed the survey before the additions were contacted to answer the six new questions. Of these, 49 completed the second-wave.

2.2.3 Response dates

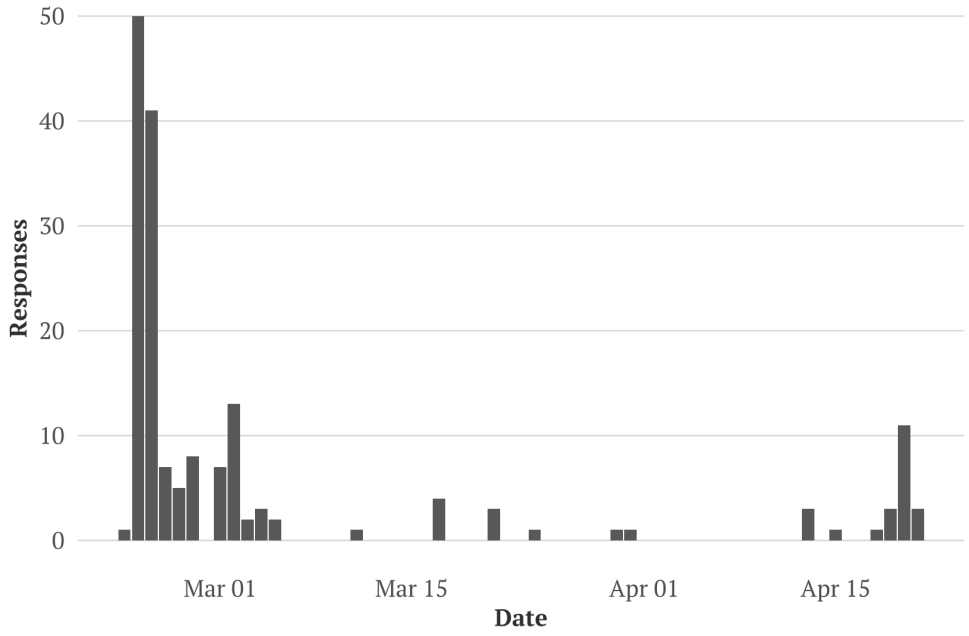

Figure 1. Response counts by date

To achieve a point-in-time, who-talks-to-whom network, the survey should be administered to everyone on the same day. Our social network questions ask, "With whom did you ... in the last 2 weeks?" Our survey response dates ranged from February 22, 2021 to April 21, 2021. Although most responses were completed in late February (112, 65%), 60 more responses were completed in March and April. The range of survey response dates weakens the validity of our social network.

Lastly, given that the survey was administered during the COVID-19 pandemic, results may not accurately reflect the Slifka community during a non-pandemic year. Many events were moved online and travel events were cancelled. One KI expressed how a large difference was the loss of accidental encounters, which were an important way of interacting with community members. Staff had to turn to new modes of engagement such as mailing gift bags and shabbat package pick-ups. Another KI

reported that it has been harder to foster new relationships. However, according to another KI, a positive aspect has been that for some students, the transition to virtual community allowed them to explore their own identities more personally.

2.3 Data analysis

Data cleaning and factor analysis was conducted on R (The R Foundation, Vienna, Austria). Tables were created using Stata 15.1 (StataCorp LP, College Station, TX). We used Gephi (Gephi, Paris, France) for the social network visualization and analysis.

2.3.1 Survey summary

The total number of survey respondents was 172 (See TABLE 1). The survey saw high levels of participation across the three upper-level classes. As expected, first-year participation was low. Moreover, the first-years report higher positive sentiments toward Slifka than the other classes, indicating a potentially stronger selection bias.

The American Jewish Identity Survey (2001) surveyed 3,930,000 Jewish U.S. residents. The most common branches were Reform (30%), Conservative (24%), None or "Just Jewish" (20%), Orthodox (8%), Secular-Humanist (1%), and Reconstructionist (1%). Slifka also exhibits a similar ranking of branches: Reform (39%), Conservative (27%), Just Jewish (10%), Orthodox (13%), Humanistic (5%), Reconstructionist (2%). Notably, Slifka has much lower rates of "Just Jewish" identifying students.

Given the pandemic, enrollment status is an important consideration when interpreting these survey results. Of the 135 respondents, 50 (37.0%) were either enrolled at home/not in New Haven or on leave. Enrollment status is not correlated with our main dependent variable – "My experiences at Slifka have made a positive contribution to my Jewish identity" (Pearson $\chi 2(12) = 4.84$, $p = .963$)

Our goal was to create a full social network of Slifka, which would require participation from all members of the community. There is no clear way to define who constitutes a "member" of Slifka. We treated participation in the survey as a proxy for membership in Slifka given our publicity and outreach efforts. Forty-nine people were named in the social network but did not themselves participate in the survey. This indicates that survey participation is not a valid proxy for membership in Slifka and that we failed to create a full social network. Alternatively, it may also indicate that some of the people named were not true "members" of Slifka. Participants may have misunderstood the question and listed their peers outside of Slifka.

Table 1. Characteristics of respondents

	N	Percent
Total	172	100.0
Year	172	100.0
2021	44	25.6
2022	55	32.0
2023	55	32.0
2024	14	10.4
Gender	135	78.5
Female	73	54.1
Male	55	40.7
Non-binary/transgender	5	3.7
Prefer not to say	2	1.5
Jewish identity[a]	131	76.2
Cultural/secular	56	42.7
Reform	51	38.9
Conservative	35	26.7
Zionist	27	20.6
Orthodox	17	13.0
Just Jewish	13	9.9
Non-Zionist	10	7.6
Traditional Egalitarian	7	5.3
Humanistic	6	4.6
Reconstructionist	3	2.3
None	2	1.5
Enrollment status, Spring 2021	135	78.5
Enrolled off campus (in New Haven)	44	25.6
Enrolled on campus	41	23.8
Enrolled at home/not in New Haven	11	6.4
On leave	39	22.7
Race	135	78.5
White	118	87.4
Latinx	11	8.1
Black	1	0.7
Asian	1	0.7
Prefer not to say	3	2.2

[a]Indicates multi-select question; percentages will not sum to 100.0

2.3.2 Factor analysis

Factor analysis was perfomed to uncover latent concepts that the survey questions captured. The analysis included the following variables:

(1) Attendance

(2) Network measures

- In-degree
- Closeness centrality
- Betweenness centrality
- Clustering
- Eigencentrality

(3) Survey variables (scale: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree)

- Q9: It is easy to make friends in Slifka.
- Q10: If I had an idea for a Slifka event, I could easily turn it into a real, publicized event.
- Q11: People like me don't have any say about what Slifka does. [reversed]
- Q12: I know at least one person to call on if grieving or celebrating
- Q34: My political beliefs are connected to my Jewish identity.
- Q35: I look at the entire Jewish community as my extended family.
- Q36: I feel a special responsibility to help Jews in need around the world.
- Q37: My Jewish identity influences my post-grad plans

Bartlett's Test ($\chi 2(91) = 661.93$, $p < .001$) indicates that the correlation matrix is not an identity matrix and that some meaningful relationships exist. The determinant of the correlation matrix is greater than 0.00001, indicating that multicollinearity was not detected (Field, Miles, and Field 2012). The scree plot resulting from a principal component analysis suggests a five-component solution.

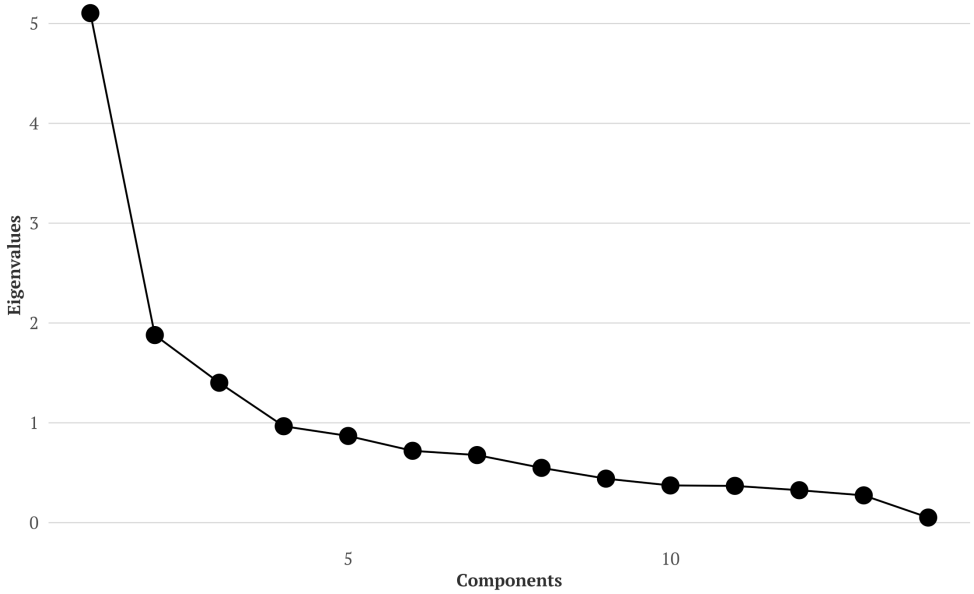

Figure 2. Scree plot

We used oblique rotation to extract factors because factors may be correlated with each other. In order of loading, the five factors can be grouped as:

1. Centrality, attendance[1]
    a. Eigencentrality (0.94)
    b. In-degree (0.89)
    c. Closeness centrality (0.78)
    d. Attendance (0.78)
    e. Betweenness centrality (0.78)

2. Jewish identity
    a. Q36: I feel a special responsibility to help Jews in need around the world. (0.81)
    b. Q35: I look at the entire Jewish community as my extended family. (0.78)
    c. Q37: My Jewish identity influences my post-grad plans. (0.75)
    d. Q34: My political beliefs are connected to my Jewish identity. (0.64)

3. Social capital
    a. Q11: People like me don't have any say about what Slifka does. (0.81)
    b. Q10: If I had an idea for a Slifka event, I could easily turn it into a real, publicized event. (0.74)

[1] See SECTION 3 for definitions of centrality measures

4. Relationship strength
    a. Q9: It is easy to make friends in Slifka. (0.78)
    b. Q12: I know at least one person to call on if grieving or celebrating (0.51)
5. Clustering
    a. Clustering (0.92)

Between-factor correlation ranges from .05 to .32.

3 Social network structural characteristics

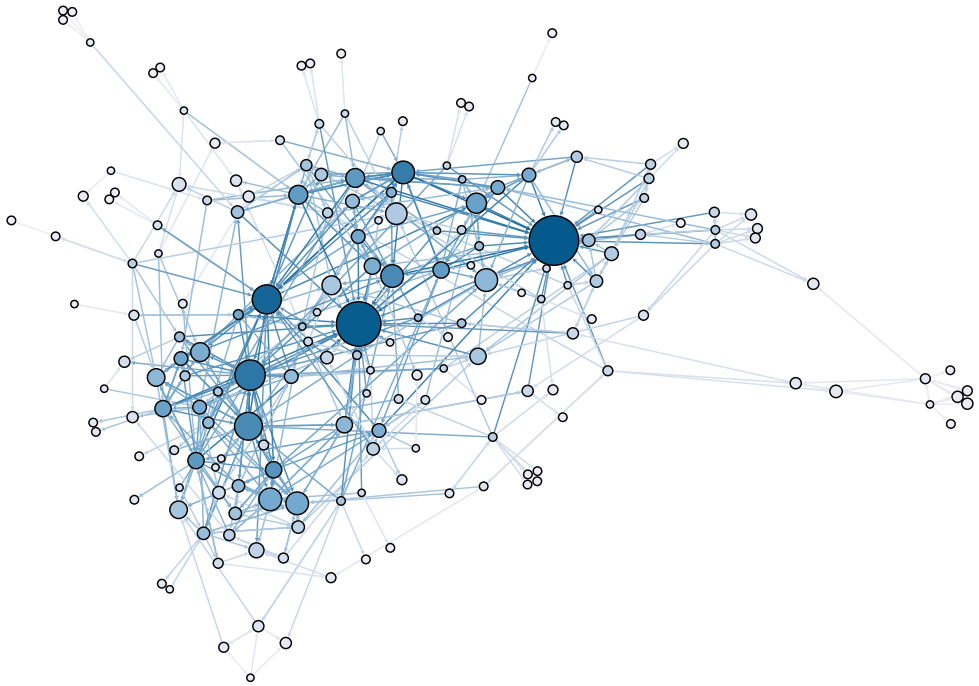

Figure 3. Network sociogram, Slifka Center

FIGURE 3 captures the "who-talks-to-whom" structure of the community (Easley and Kleinberg 2010). Each node in the network graph represents one survey respondent or one individual listed in a survey response. Each edge represents a directed connection. In other words, if respondent A listed respondent B in Q5 or Q6, an arrow points from Node A to Node B. If Node B also listed Node A in the survey, then the arrow is bidirectional. The sum of a node's inward and outward connections is the node's degree. The Slifka network's average degree is 3.00. The average Slifka member talks with three other Slifka members. However, the distribution of degree values is extremely skewed. We look at in-degree values because several otherwise

well-connected individuals were non-respondents. In FIGURE 3, node size is proportional to eigencentrality (see below) and node hue is proportional to in-degree.

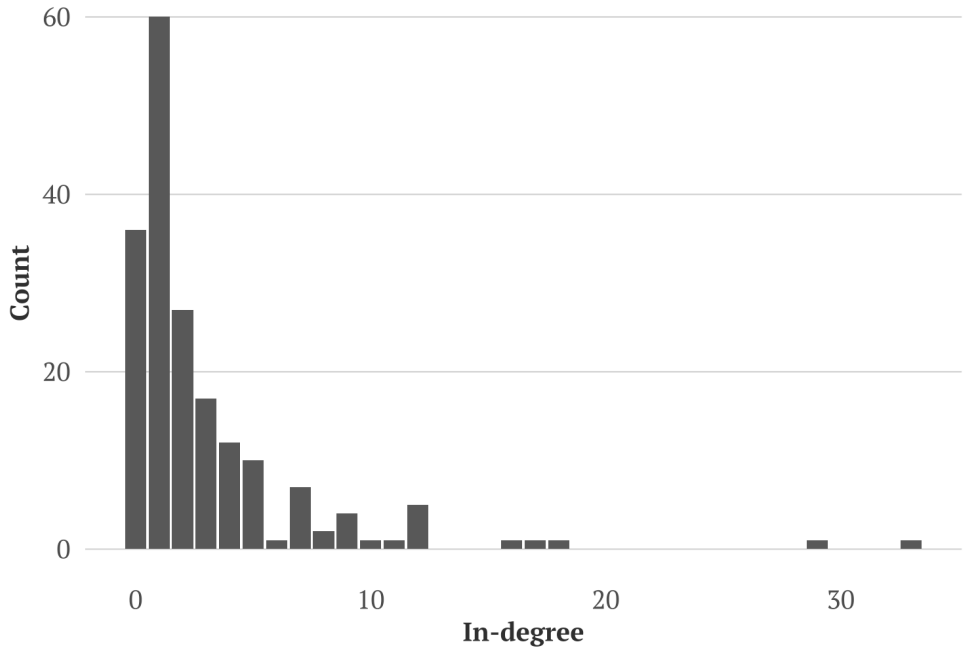

Figure 4. Distribution in-degree values

Connectivity denotes whether or not a path exists for every pair of nodes (Easley and Kleinberg 2010). Slifka' social network is connected, save for three pairs of nodes that are not connected to any other node. As such, there is one main network component of interest as demonstrated in FIGURE 3.

If two connected nodes are said to have a graph distance of one, the average graph distance (path length) in the Slifka network is 3.93. For any given individual in Slifka, any other individual is, on average, about four connections away. The network diameter, or the longest graph distance between any two nodes, is eight. The two most distal individuals in the network are eight connections removed from each other.

Clustering coefficient of a node is defined as the probability that two randomly selected connections of the node are also connected (Easley and Kleinberg 2010). A clustering coefficient of zero indicates that none of the nodes' connections are connected to each other. A clustering coefficient of one indicates complete triadic closure in the node's network. A principle from Rapoport (1953) shows us the importance of cluster coefficients: "If two people in a social network have a friend in common, then there is an increased likelihood that they will become friends themselves at some point in the future."

A three-stranded cord will not quickly be broken.

– Ecclesiastes, Kohelet 4:3

The average clustering coefficient in the Slifka network is 0.264. For any two individuals connected to the same Slifka member, on average there is a 26% chance that they are also connected.

There are several measures available for understanding the "centrality" of individuals or groups of individuals in Slifka. Degree-based centrality represents how directly active an individual is in the network (O'Malley and Marsden 2009). It measures how many times an individual was listed by others in the survey (in-degree).

Betweenness centrality measures how often a node exists on the shortest paths between other nodes. Individuals with high betweenness centrality are more likely to broker or control other links in the network (O'Malley and Marsden 2009). One key individual for betweenness centrality was one of the previous student presidents. Their betweenness centrality statistic (2,099) was significantly higher than the next three students (1,394; 1,276; and 1,269).

Closeness centrality is calculated as the reciprocal sum of the *length* of the shortest paths between the node and all other nodes. The inverse average closeness centrality in Slifka is 3.21.

Eigenvector centrality is representative of "influence" in the network and spans from zero to one. Higher values are assigned to nodes that are connected to central actors. Even if a node has a high in-degree, if all its adjacent nodes are peripheral, then it will have low eigenvector centrality. In Slifka, there are many individuals who are well-connected in count, but have low eigenvector centrality, meaning they are not connected to the "influential center" of Slifka. An example of this are three staff members who have high in-degree counts: 8, 9, and 11. Many students are engaging with these staff, and these students tend to be "non-central." As such, compared to what we might have expected of such highly connected individuals, the staff members have low eigencentrality: 0.304, 0.288, 0.268. The opposite is also true: some members only have a few connections, but those connections position them close to the influential center of Slifka. An example would be Respondent 26 who was only named twice as a connection, but has an eigenvector centrality of 0.509, which is 17th among 188. This is because they are connected with central staff members and student leaders.

4 Discussion

How can Slifka move toward a more robust community with rich and meaningful relationships? We begin with the understanding that "improving community" is not a homogenous aspiration. Individuals in the community differentially ascribe value to the many possible facets of "community." One KI expressed how students' individual journeys in exploring and solidifying their Jewish identity is of greater importance than the propensity of Slifka individuals to form relationships with each other. For them, network density is important insofar as it facilitates the impact that Slifka has on individuals' identities. Therefore, this KI is content with a "spoke" model of relationships in which students are connected to the center, but do not necessarily exist in a dense network. Another KI described how their community building work involves "imagining around the question of inclusion." According to this KI, a "centrality"-focused approach to community overlooks the value of "micro-communities" on the peripheries. There may be students on the periphery who do feel a strong sense of belonging and are having their needs met by Slifka. A third KI agreed on Slifka's core mission as an educational mission for students' identities. They particularly emphasized the importance of social capital in fostering community. Like all of the other KI's, this KI valued inclusivity in the community: for instance whether or not social capital is distributed across different identities.

Fostering community is not nearly as monolithic as increasing the average network degree, driving up the semesterly attendance rate, or promoting adherence to rituals. Our survey has tried to shine a light on a variety of community values. Without distilling the diversity of viewpoints in Slifka into a singular definition or metric for improving community, this exploratory analysis attempts to peer into the snapshots captured by our survey in order to offer an impetus for further inquiry at a thicker, relational level. For students or staff in Slifka who want to shape their community for the better, the organization-level vantage point of this study uncovers unexpected and helpful insights. As potential areas of need are brought into focus, this preliminary analysis hopes to allow members to more strategically engage in their community building efforts.

4.1 What predicts a positive Slifka experience?

The traditional way to measure a positive Slifka experience has been to look at attendance counts. In the Hillel community, the standard of evaluation is six engagements. When a student attends six events, they presumably reach a key turning point. Here, we ask if other measures such as social capital may be a better predictor of a positive experience. Our dependent variable is Q62: "My experiences at Slifka have made a positive contribution to my Jewish identity." Answer options were: "Strongly disagree," "Somewhat disagree," "Neither agree nor disagree," "Somewhat agree,"

"Strongly agree." No participants responded "Strongly disagree." We normalize the data to account for the potential bias in scaling.

4.1.1 Network centrality

First, we examine the relationship between network centrality and Q62 more closely. Conclusions based on the centrality measures are difficult to make because it is likely that the survey did not capture the full social network, and it was a point-in-time measure during a remote semester. These analyses describe Slifka's community as it exists currently. It cannot predict the effects of certain interventions.

Among the network measures, clustering was not significantly correlated with Q62 ($p = .156$). This suggests that the degree to which one's connections are connected to each other may not be as important to a positive contribution to identity. Closeness centrality has a strong, negative relationship with Q62. People with a high Q62 rating are not necessarily close in relational distance to everyone else in Slifka. This may speak to the fact that Slifka has many subcommunities, and being connected to others outside of one's subcommunity is not as relevant.

Eigenvector centrality exhibits a very strong, positive correlation with Q62 ($p < .001$). This is true even after accounting for other network measures: in-degree, closeness, betweenness, and clustering. This suggests that the people who experience a positive impact on their Jewish identity tend to also be the ones who are connected to others who are central in Slifka's network.

Table 2. Regression results

	Dependent variable:
	Positive impact on Jewish identity (Q62)
In-degree	-0.185
	(0.167)
Closeness centrality	-0.172*
	(0.097)
Betweenness centrality	0.144
	(0.126)
Clustering	0.119
	(0.097)
Eigencentrality	0.500***
	(0.173)
Constant	0.000
	(0.089)
Observations	107
R^2	0.198
Adjusted R^2	0.159
Note:	*p**p***p<0.01

The relationships between network centrality and Q62 are more in line with the "spoke" model than the dense network model. As it exists currently, students who experience a positive impact on their Jewish identity largely have a key relationship with someone who is central. Existing in strong clusters or being connected across the community at large are not as strongly correlated with a positive experience. The implications can go both ways.

- Slifka may decide to further empower and enable key, central actors to form connections with more people.
- Slifka may also decide to scaffold well-connected, peer-supported environments that do not need a direct connection to a key actor such that those environments also become more conducive for positive contributions to identity.

4.1.2 Social capital

The following tables show the frequency and shares of Q62 responses among each of the factors partitioned into equal terciles. Respondents in the third tercile are rated more highly on the given factor.

Table 3. Cross tabulation of factor terciles

Social capital factor	Positive impact on Jewish identity (Q62)				
	Somewhat disagree	Neither	Somewhat agree	Strongly agree	Total
1	3	7	11	9	30
	10 %	23 %	37 %	30 %	100 %
2	0	1	10	19	30
	0 %	3 %	33 %	63 %	100 %
3	0	0	4	28	32
	0 %	0 %	13 %	87 %	100 %
Total	3	8	25	56	92
	3 %	9 %	27 %	61 %	100 %

Table 4. Cross tabulation of factor terciles

Jewish background factor	Positive impact on Jewish identity (Q62)				
	Somewhat disagree	Neither	Somewhat agree	Strongly agree	Total
1	1	6	7	13	27
	4 %	22 %	26 %	48 %	100 %
2	0	1	14	17	32
	0 %	3 %	44 %	53 %	100 %
3	2	1	4	26	33
	6 %	3 %	12 %	79 %	100 %
Total	3	8	25	56	92
	3 %	9 %	27 %	61 %	100 %

Table 5. Cross tabulation of factor terciles

Relationship strength factor	Positive impact on Jewish identity (Q62)				
	Somewhat disagree	Neither	Somewhat agree	Strongly agree	Total
1	1	5	12	12	30
	3 %	17 %	40 %	40 %	100 %
2	2	1	7	22	32
	6 %	3 %	22 %	69 %	100 %
3	0	2	6	22	30
	0 %	7 %	20 %	73 %	100 %
Total	3	8	25	56	92
	3 %	9 %	27 %	61 %	100 %

Table 6. Cross tabulation of factor terciles

Network centrality factor	Positive impact on Jewish identity (Q62)				
	Somewhat disagree	Neither	Somewhat agree	Strongly agree	Total
1	2	5	11	11	29
	7 %	17 %	38 %	38 %	100 %
2	1	2	11	19	33
	3 %	6 %	33 %	58 %	100 %
3	0	1	3	26	30
	0 %	3 %	10 %	87 %	100 %
Total	3	8	25	56	92
	3 %	9 %	27 %	61 %	100 %

The tables demonstrate how respondents who rate higher on the five factors also tend to experience a positive impact from Slifka. To understand which factors are most consequential for a positive Slifka experience, we used multiple regression.

Table 7. Regression results

	Dependent variable:
	Positive impact on Jewish identity
Factor 1: Centrality	0.130*
	(0.075)
Factor 2: Jewishness	0.128*
	(0.069)
Factor 3: Social capital	0.436***
	(0.068)
Factor 4: Relationship strength	0.047
	(0.067)
Factor 5: Clustering	0.015
	(0.070)
Constant	0.923***
	(0.064)
Observations	92
R^2	0.447
Adjusted R^2	0.414
Note:	*p**p***p<0.01

When accounting for each of the five factors from the factor analysis, the regression reveals that only social capital has a significant relationship with the dependent variable. A limitation is that, according to the regression, these five factors explain less than half of the variation in Q62.

Now we return to the question of whether attendance is a valid indicator for a successful community and whether there may be more helpful indicators.

Table 8. Regression results

	Dependent variable:
	Positive impact on Jewish identity (Q62)
Attendance	0.256***
	(0.093)
Constant	0.000
	(0.092)
Observations	111
R^2	0.066
Adjusted R^2	0.057
Note:	*p**p***p<0.01

The regression of Q62 and attendance reveals a strong, positive relationship between the two variables. In line with intuition, individuals who experience a positive impact from Slifka also attend many events.

Table 9. Regression results

	Dependent variable:
	Positive impact on Jewish identity (Q62)
Attendance	0.051
	(0.088)
Social capital factor	0.602***
	(0.088)
Constant	0.000
	(0.083)
Observations	92
R^2	0.384
Adjusted R^2	0.370
Note:	*p**p***p<0.01

When we control for social capital, attendance no longer has a significant relationship with Q62. Even when controlling for attendance, social capital remains a strong predictor.

We have explored potential factors that are connected to a positive Slifka experience. There may be other causal factors for a positive impact, of which attendance and social capital are only indicators. However, the value of social capital for community members is well understood in the literature. Moreover, TABLE 10 shows that after accounting for other major components of a high Q62 rating, social capital was still a strong predictor of Q62.

Certainly, attendance statistics are helpful. They can be easily collected and aggregated, and they demonstrate how students engage with official events organized by Slifka. An abstract indicator such as social capital cannot be readily assessed during the course of the semester. Nevertheless, these findings suggest that Slifka can consider investing more effort into fostering social capital among students.

Survey responses show that 57 percent of respondents have never been in a leadership role in Slifka. Interestingly, respondents rated highly on social capital exist in two relatiavely separate sub-communities (See APPENDIX 1, FIGURE 7). Providing more organizational avenues for participation and agency is one possible means of increasing overall social capital. One KI reported that the Urim Fellowship is a great space for students to effect change in Slifka. For example, an environmental justice group was able to promote institutional change in the dining halls to promote sustainability in Slifka.

Beyond organizational avenues, social capital also depends on the general atmosphere of a community – the unsaid but understood expectations of what students can or cannot accomplish. An indicator of this is the propensity of students to bring new ideas. For instance in the past, new classes such as a medical ethics and theater class were born out of student initiatives. According to another KI, one year, a student with experience in Krav Maga wanted to organize classes, and was able to do so. Oftentimes, students require institutional scaffolding in order for their initiatives to come to fruition. Fostering student initiative, both within and outside of institutional structures, is a helpful way of building social capital and promoting a space where students can experience positive impacts on their Jewish identity.

4.2 Connections for grieving or celebrating

A friend loves at all times,

And a brother is born for adversity

– Proverbs, Mishlei 17:17

Q12 captures one of the most important roles of community: “I know at least one person to call on if grieving or celebrating.” The majority of respondents (n = 83) report that they strongly agree with the statement. However 31 respondents did not agree to the statement.

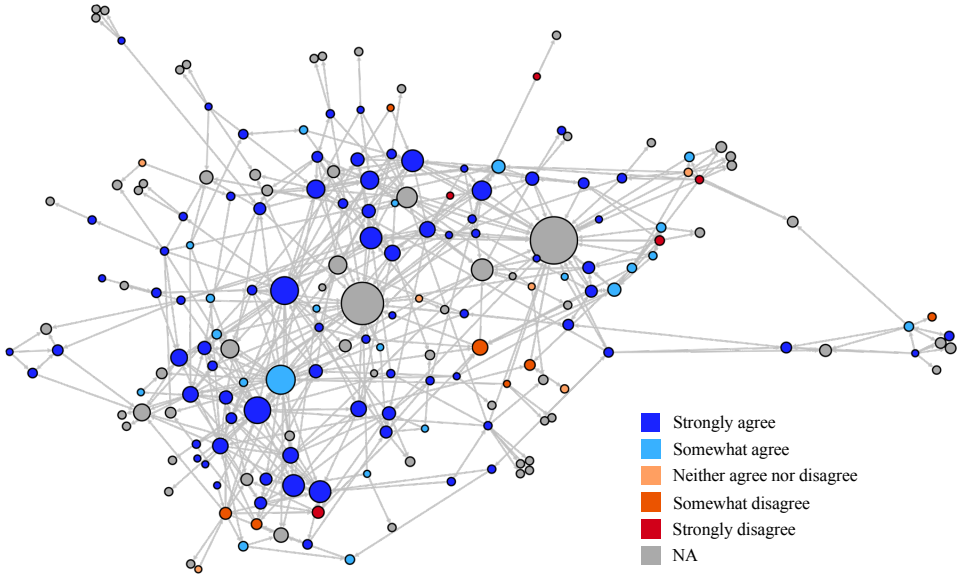

Figure 5. Network sociogram, connections for grieving or celebrating

FIGURE 5, visualizes Slifka's network by individuals' responses to Q12. Respondents who did not agree that they have someone to call on seem to lie in the peripheries of the network. Mean statistics provide a more detailed understanding of how centrality may be related with knowing someone in Slifka to grieve or celebrate with.

Table 10. Network characteristics of respondents

I know at least one person to call on if grieving or celebrating (Q11)	N(%)	In-Degree	Eigencentrality	Clustering
Total	121 (69.1)	2.89	0.24	0.23
Strongly disagree	5 (4.1)	1.40	0.16	0.21
Somewhat disagree	7 (5.8)	2.57	0.19	0.22
Neither agree nor disagree	6 (5.0)	0.33	0.14	0.08
Somewhat agree	22 (18.2)	2.09	0.19	0.30
Strongly agree	81 (66.9)	3.42	0.28	0.22

Respondents reporting "Strongly agree" have on average about 1-2 more individuals in communication with them than respondents reporting "Strongly disagree" or "Somewhat disagree." None of these statistics show causal links for the Q12 connection leading to direct solutions. However they do paint a picture of the environments where individuals lacking a Q12 connection can be found and suggestions for how to reach them more meaningfully.

1. People lacking the Q12 connection are not isolated in the network. The clustering coefficient column reveals no meaningful correlation. Respondents

reporting "Disagree" are situated in relational sub-networks that are just as intra-connected as the agreeing respondents. This means that just because a member is relatively well connected does not necessarily mean they have someone to grieve or celebrate with. "Somewhat disagree" respondents even have a higher in-degree average "somewhat agree" respondents. This also means that just because a member is peripheral and not well-connected doesn't mean that they are lacking a Q12 connection. They may have one or two key relationships that fulfill that need.

2. Connection to a central member may matter more than connection in general. "Strongly agree" respondents have a notably higher eigencentrality scores than all other respondents. Even if two respondents have the same in-degree counts, the respondent who is connected with nodes that are themselves well-connected would have a higher likelihood of also having a Q12 connection.

This finding resonates with one KI's hypothesis that students on the periphery may still experience their needs being met. One does not necessarily need a tight-knit, clustered group of Slifka friends to have a Q12 connection. However, this does not render centrality irrelevant because key to this phenomenon is that, even if they are not central themselves, they are connected to someone who *is* very central.

5 Conclusion

Behold, how good and how pleasant it is

For brothers to live together in unity!

– Psalms, Tehillim 133:1 (NASB)

As an organization, Slifka meets the needs of a wide variety of students. Key informant interviews and survey results have demonstrated that Slifka serves as an important locus for building relationships and exploring one's own identity alongside others. On metrics such as "warmth" and "inclusivity," Slifka performs very well. The findings from this study, grounded in the wisdom of key informants and social capital and social network principles, present alternative ways to build upon Slifka's 25-year history of fostering community.

For two organizational values, positive impact on Jewish identity and connection to someone to grieve or celebrate with, being connected to an influential or highly involved individual matters more than existing in a highly connected sub-network. Meaningful involvement exists in the "peripheries" of Slifka's social network.

According to survey data and analysis, social capital is more predictive of a positively impactful experience than attendance. It also has the strongest relationship with positive experiences than the four other major factors: network centrality, Jewish background, relationship strength, and clustering. Slifka can consider implementing more diverse avenues for building social capital (See SECTION 4.1.2 for specific suggestions).

Building community is most successful as a reflexive and iterative endeavour. Forms and processes of institutions often experience an inertia that is helpful for preserving lessons and values from the past, but unhelpful for taking time to hold up a mirror and raise new questions. This report has used social network analysis and principles of social capital to help Slifka hold a mirror up to itself, capitalize on their strengths, and bring new questions to greater attention. Fostering community is by no means an easy task—but it reaps manifold rewards.

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7 Appendices

7.1 Appendix 1: Sociograms

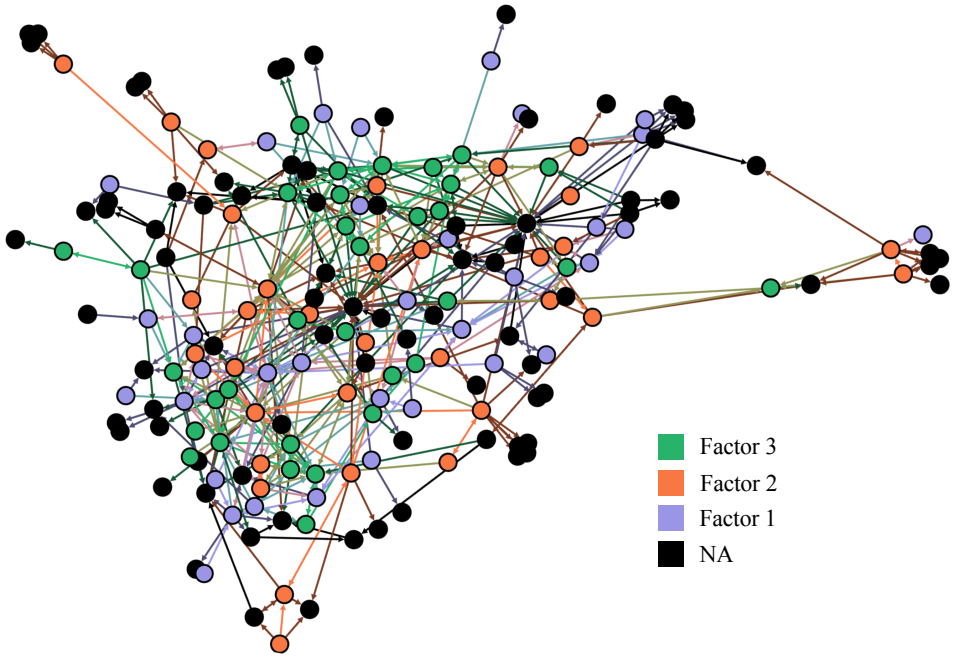

Figure 6. Network sociogram, social capital factor terciles

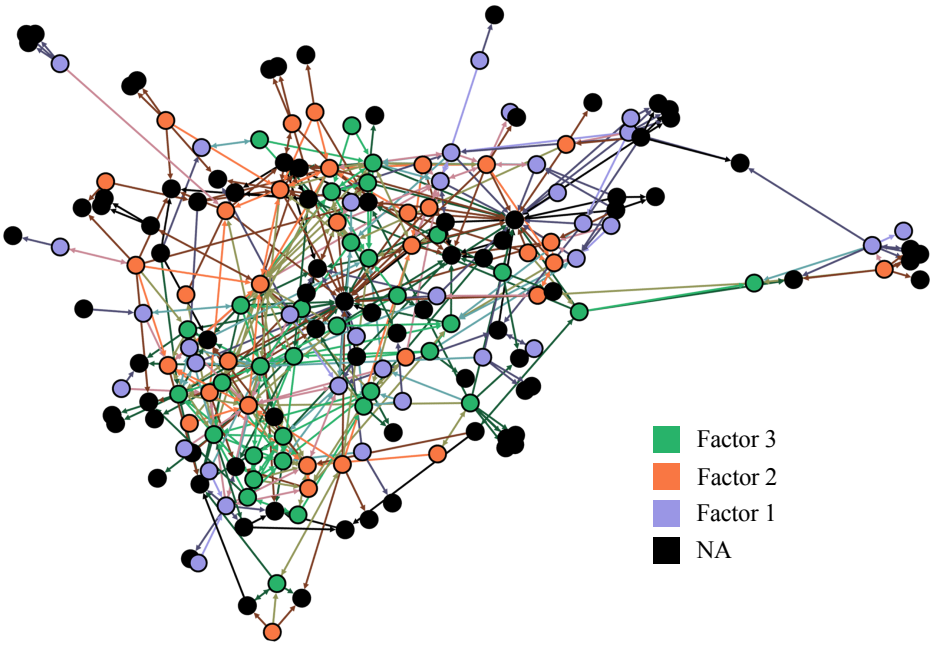

Figure 7. Network sociogram, relationship strength factor terciles

7.2 Appendix 2: Interview Guides

Student key informants

- Please describe your role in Slifka & your experience working with students so far.
- Can you tell me about your general experience in Slifka so far?
- What kind of interactions are there in between the three prayer groups?
- Can you tell me about your relationship with the board of trustees?
- How has college/being a part of Slifka shaped your Jewish identity?
- Can you tell me about something you wish was different?
- Can you tell me about something you are actively trying to change?
- Knowing what you know about the project so far, is there anything specific that you would want to know about the nature of social relationships in Slifka?
- What does "inclusivity" mean for you in Slifka?
- Is there anyone else (student, admin, etc) that you think we should definitely meet with?

Staff key informants

- Could you describe your role in Slifka for us?
- Could you tell us a bit about your experience working with students so far?
- What was your experience like building community during the pandemic?
- How can students effect change that they want?
- Knowing what you know about the project so far, is there anything specific that you would want to know about the nature of social relationships in Slifka?
- What does "inclusivity" mean for you in Slifka?

7.3 Appendix 3: Survey

Slifka
Center for Jewish Life at Yale

Intro

Slifka Community Survey

The main goal of this project is to understand the Slifka community at Yale. Who feels a part of it, and why? How does this sense of belonging affect students' feelings towards Judaism?

Once you complete the survey, you will be entered into a drawing for one of six $36 gift cards to Atticus Bookstore/Café.

While this survey is not anonymous, all answers will be kept strictly confidential; we understand that some of the questions may be sensitive and commit to maintaining your privacy. The individuals who will have access to this survey's responses are the project organizers: Emmanuel Cantor (Rabbinic Intern), Professor Josh Kalla (Political Science), Rabbi Jason Rubenstein, and student researchers Kelsey Gabriel '22 and John Park '21. Anonymized results will be used for academic purposes and quality improvement purposes. When analyzing this survey, we may also use other Slifka data, such as information on event attendance.

If you have any questions, please contact the student researchers, Kelsey (kelsey.gabriel@yale.edu) and John (john.park@yale.edu).

Thank you in advance for your participation!

Do you agree to participate?

- ◯ Yes
- ◯ No

Class Year

First name

Last name

What is your original class year?

- ◯ 2024
- ◯ 2023
- ◯ 2022
- ◯ 2021

Are you currently in your first year at Yale?

- ◯ Yes
- ◯ No

Social Network

For each question, write up to **5** individuals in Slifka (not groups). This includes students and staff.

With whom at Slifka (including students and staff) did you choose to spend time with in the last 2 weeks? Please write up to 5 names.

You do not need to provide all 5 – feel free to leave some blank.

Person 1 _____

Person 2 _____

Person 3 _____

Person 4 _____

Person 5 _____

With whom at Slifka (including students and staff) did you choose to communicate online in the last 2 weeks? Please write up to 5 names.

You do not need to provide all 5 – feel free to leave some blank.

Person 1 _____

Person 2 _____

Person 3 _____

Person 4 _____

Person 5 _____

Social capital

To what extent do you agree or disagree with the following statements?

It is easy to make friends in Slifka.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
◯	◯	◯	◯	◯

If I had an idea for a Slifka event, I could easily turn it into a real, publicized event.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

People like me don't have any say about what Slifka does.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

I know at least one person in Slifka (staff or student) whom I would call on if I were grieving the loss of a family member or celebrating a personal victory.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

Optional: You indicated that you know at least one person in Slifka (staff or student) whom you would call on if you were grieving the loss of a family member or celebrating a personal victory.

Please list whom you would call on (separated by commas).

Block 16

Compared to people you've met in other contexts at Yale, how well do people at Slifka know **you**?

- ○ Very well
- ○ About the same
- ○ Not very well

Compared to people you've met in other contexts at Yale, how well do you know the **people at Slifka**?

- ○ Very well
- ○ About the same
- ○ Not very well

Block 17

To what extent do you agree or disagree with the following statement?

My experiences at Slifka have made a positive contribution to my Jewish identity.

- ○ Strongly agree
- ○ Somewhat agree
- ○ Neither agree nor disagree
- ○ Somewhat disagree

- ◯ Strongly disagree

Block 14

Mark the degree to which you think the given characteristics describes Slifka.

Warm – Cold

3 (Warm)	2	1	0	1	2	3 (Cold)
◯	◯	◯	◯	◯	◯	◯

Diverse – Homogenous

3 (Diverse)	2	1	0	1	2	3 (Homogenous)
◯	◯	◯	◯	◯	◯	◯

Exciting – Boring

3 (Exciting)	2	1	0	1	2	3 (Boring)
◯	◯	◯	◯	◯	◯	◯

Inviting – Cliquey

3 (Inviting)	2	1	0	1	2	3 (Cliquey)
◯	◯	◯	◯	◯	◯	◯

Slifka Involvement: Intro

The next few questions will ask about your involvement in Slifka.

Slifka involvement: Non-first years

How often do you attend Shabbat/Friday night dinner at Slifka? (in a non-pandemic semester)

- ◯ Once a year or less
- ◯ A few times a year
- ◯ Once a month
- ◯ Most weeks
- ◯ Every week

Outside of Friday night, how often do you eat meals at Slifka? (in a non-pandemic semester)

- ◯ Once a year or less
- ◯ A few times a year
- ◯ Once a month
- ◯ Most weeks
- ◯ Multiple times each week

How many Slifka events do you attend in a non-pandemic semester?

- ◯ 0
- ◯ 1-2
- ◯ 3-5
- ◯ 6-9
- ◯ 10 or more

Slifka Involvement Part 2

How many leadership roles have you taken on at Slifka, currently or in the past?
(e.g., leadership in a student organization, Hillel student board, First Year ambassador program, representative to the Board of trustees, etc.)

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4+

Are you involved in any of these Slifka-affiliated groups? (Select all that apply)

- ☐ Reform Havurah
- ☐ Egalitarian Minyan
- ☐ Orthodox Minyan/Young Israel House
- ☐ Magevet
- ☐ Klezmer
- ☐ AEPi
- ☐ Yale Friends of Israel
- ☐ Think Tank Working Groups
- ☐ Tzedek Fellowship
- ☐ Urim Fellowship
- ☐ Jewish Learning Fellowship (JLF)
- ☐ Yale Israel Journal
- ☐ Shibboleth
- ☐ Other (please fill) _____

Block 13

Next, we will ask some demographic questions.

Demographics

Enrollment status for Fall 2020

- ◯ Enrolled on campus
- ◯ Enrolled off campus (in New Haven)
- ◯ Enrolled at home/not in New Haven
- ◯ On leave

Enrollment status for Spring 2021

- ◯ Enrolled on campus
- ◯ Enrolled off campus (in New Haven)
- ◯ Enrolled at home/not in New Haven
- ◯ On leave

With what gender do you identify?

- ◯ Male
- ◯ Female

- ◯ Non-binary / trans gender
- ◯ Prefer not to say

What is your race? (Select all that apply)

- ☐ Black or African American
- ☐ Native American
- ☐ White
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Latinx
- ☐ Prefer not to say

What is your sexual orientation?

- ◯ Heterosexual
- ◯ Gay/Lesbian
- ◯ Queer
- ◯ Bisexual
- ◯ Pansexual
- ◯ Asexual
- ◯ Other/Questioning
- ◯ Prefer not to say

What is the 5-digit ZIP code of the home you grew up in?

(e.g., Slifka is 06511) If you are not sure, you can look up your ZIP code at https://tools.usps.com/zip-code-lookup.htm?byaddress

Jewish ID: intro

The next few questions will ask about your Jewish identity.

Jewish ID 1

How do you identify Jewishly? (Select all that apply)

- ☐ Cultural/secular
- ☐ Humanistic
- ☐ Orthodox
- ☐ Reform
- ☐ Reconstuctionist
- ☐ Just Jewish
- ☐ Conservative
- ☐ Traditional Egalitarian
- ☐ Zionist
- ☐ Non-Zionist
- ☐ None
- ☐ Other (specify)
- ☐ I Don't know

Which of these organizations/events did you participate in growing up? (Select all that apply)

- [ ] Attended a synagogue
- [ ] Had a bar/bat mitzvah
- [ ] Went to a Jewish summer camp
- [ ] Visited Israel
- [ ] Attended Jewish elementary or middle school
- [ ] Attended Jewish high school
- [ ] Participated in Jewish youth group

Jewish ID 2

For the past High Holidays, I... (Select all that apply)

- [ ] Went home
- [ ] Attended any services (Zoom or in person; could be anywhere, not just Slifka)
- [ ] Attended one or more services, but not all of them (Zoom or in person; could be anywhere, not just Slifka)
- [ ] Ate a special holiday meal with close friends or family
- [ ] Refrained from attending class
- [ ] Fasted on Yom Kippur

This past Passover, I... (Select all that apply)

- [ ] Went to 1 seder
- [ ] Went to 2 seders
- [ ] Refrained from eating bread products
- [ ] Refrained from attending class

To what extent do you feel...

	Not at all	A little	Somewhat	Very much
A connection to a Jewish community.	○	○	○	○
A connection to the Jewish community at Yale.	○	○	○	○
A connection to Jewish customs and traditions.	○	○	○	○

Jewish ID 3

To what extent do you agree or disagree with the following statements?

My political beliefs are connected to my Jewish identity.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

I look at the entire Jewish community as my extended family.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

I feel a special responsibility to help Jews in need around the world.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

My Jewish identity influences my post-grad plans (vocation, employer, location, work/life balance, ...)

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
○	○	○	○	○

Last comments

Is there anything else you want to say about Slifka or about this survey? (optional)

If we have follow up questions regarding survey results, can we contact you?

- ○ Yes
- ○ No, thank you

Please enter your email address to be entered in a drawing for an Atticus gift card. Thank you!