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"Quantitative, Quantitative, Quantitative!" Is Qualitative Research the Jan Brady of Social Sciences Data Services?

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Given this presentation's title, some may be thinking, "Who is Jan Brady, and what does she have to do with social sciences data services?" *The Brady Bunch* television show, aired in the United States from 1969-1974, lives on via syndicated reruns and has made its way in to the American popular culture lexicon. Those familiar with the show are likely also familiar with the episode in which middle-daughter Jan laments her older sister always receiving accolades while she languishes in her shadow – "Marcia, Marcia, Marcia!" she cries in despair.

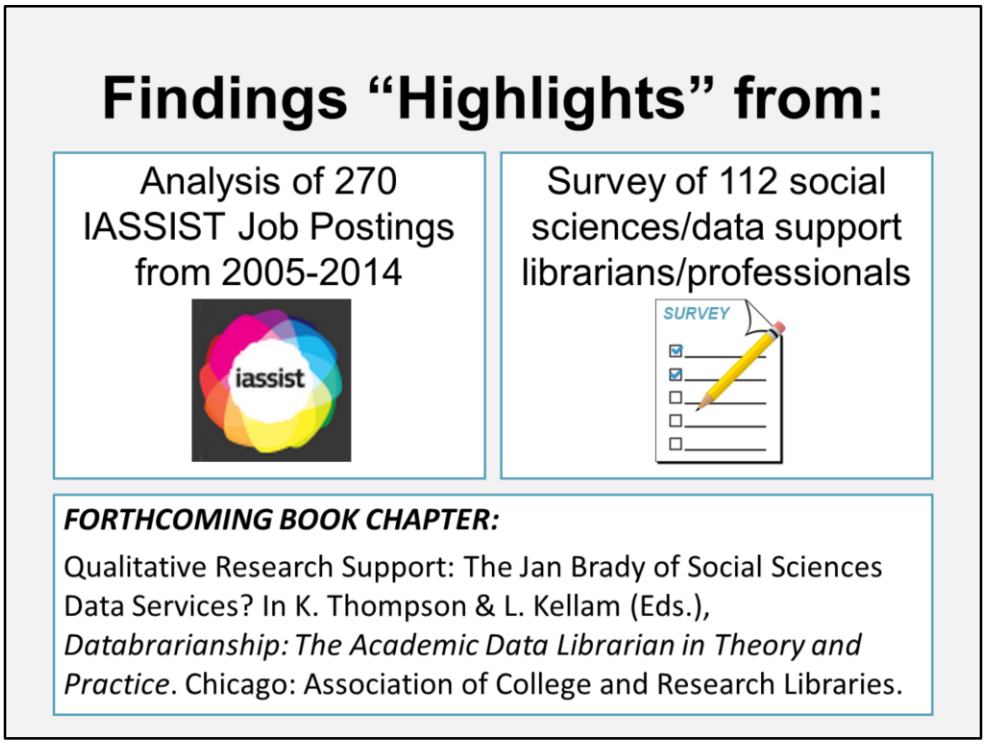
"The Brady Bunch: Marcia, Marcia, Marcia! - YouTube," accessed April 12, 2015, https://youtu.be/w2fXs3bf-p0.

Even a recent Snickers™ candy bar commercial parodied this infamous episode – with Mrs. Brady's commenting, "Jan, this isn't about you," and actor Steve Buscemi as "Jan" whining, "It never is!" before stomping off in true Jan-Brady form.

SNICKERS® - "The Brady Bunch," 2015, https://youtu.be/rqbomTIWCZ8.

In the world of social sciences, qualitative researchers are often similarly overshadowed by their quantitative colleagues – "Quantitative, quantitative, quantitative" perhaps echoing through their psyches. The abounding literature spanning decades, the varied social sciences, and continents points to a continuing "debate" over the "divide" between quantitative and qualitative – with the latter often relegated to the losing side of this debate. Despite the politics of social science research that often pits quantitative researchers against qualitative ones, many social sciences researchers continue to employ qualitative research methods, and many researchers trying to bridge this "divide" are increasingly turning to triangulated or mixed methods (i.e., a combination of quantitative and qualitative data analysis).

Consequently, librarians providing data services for researchers and learners in the social sciences should be offering data support services to qualitative researchers as well as quantitative ones. But, is this the case in practice? Do social sciences librarians devote their primary attention to quantitative researchers to the detriment of qualitative researchers? Is qualitative research the Jan Brady of social sciences data services?



In this presentation I will share findings highlights from: (1) A quantitative content analysis of 270 International Association for Social Science Information Services & Technology (IASSIST) job repository site's job postings from the years 2005-2014, examining quantitative and qualitative data support expectations; and (2) A survey of social sciences librarians and other data-support professionals, gauging the extent of quantitative and qualitative data/research support these professionals presently provide at their academic institutions and their thoughts regarding the relevance of qualitative data/research for the future of data support services. Some of these findings plus additional analyses of this and other data will be published in this forthcoming book chapter, "Qualitative Research Support: The Jan Brady of Social Sciences Data Services?"

IASSIST Postings 2005-2014 by Job Type (N=270)

Job Type	Frequency	%
Academic Librarian	145	53.7%
Academic Data Archivist	1	0.4%
Academic Technology Support	39	14.4%
Academic Researcher	34	12.6%
Government	10	3.7%
Non-Academic	40	14.8%
Public Library	1	0.4%

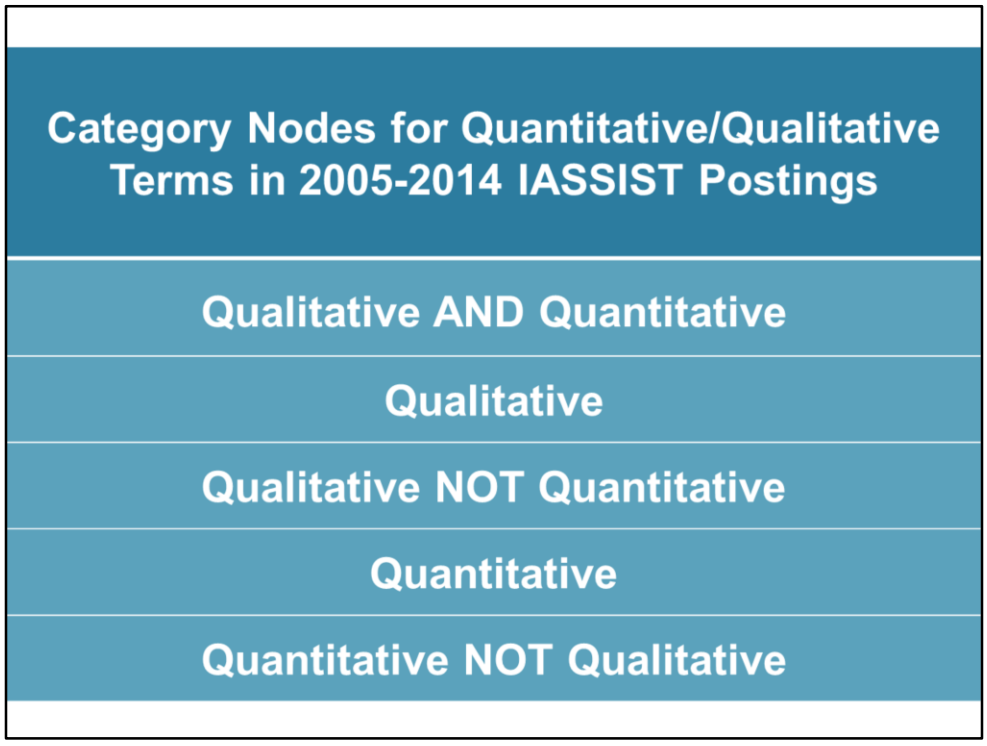
Thanks to Jingfeng Xia and Minglu Wang for 2005-2012 postings dataset!

I coded the 270 jobs as the "job types" displayed in this table. As shown, academic librarian positions accounted for the majority of the IASSIST postings in this time frame.

Quantitative & Qualitative Terms from Top 200 Word Frequency Query

	Word Counts
QUANTITATIVE	
Statistics/Statistical	307
Numeric/Numerical	125
Quantitative	117
SPSS	80
SAS	64
Stata	62
TOTAL:	**755**
QUALITATIVE	
Qualitative	55
TOTAL:	**55**

To perform the quantitative content analysis of these job postings, I imported the dataset into NVivo qualitative data analysis software. To begin my analyses, I first ran a word frequency query across all of the codable text fields (Job Title, Required Skills, Preferred Skills, and Job Description) to count the top 200 words grouped by stemmed endings. I then visually scanned the query results to glean terms explicitly related to qualitative and quantitative data/services, the respective word counts of which are listed in this table. As is indicated, quantitative data/services terms overwhelmingly dominated qualitative terms.

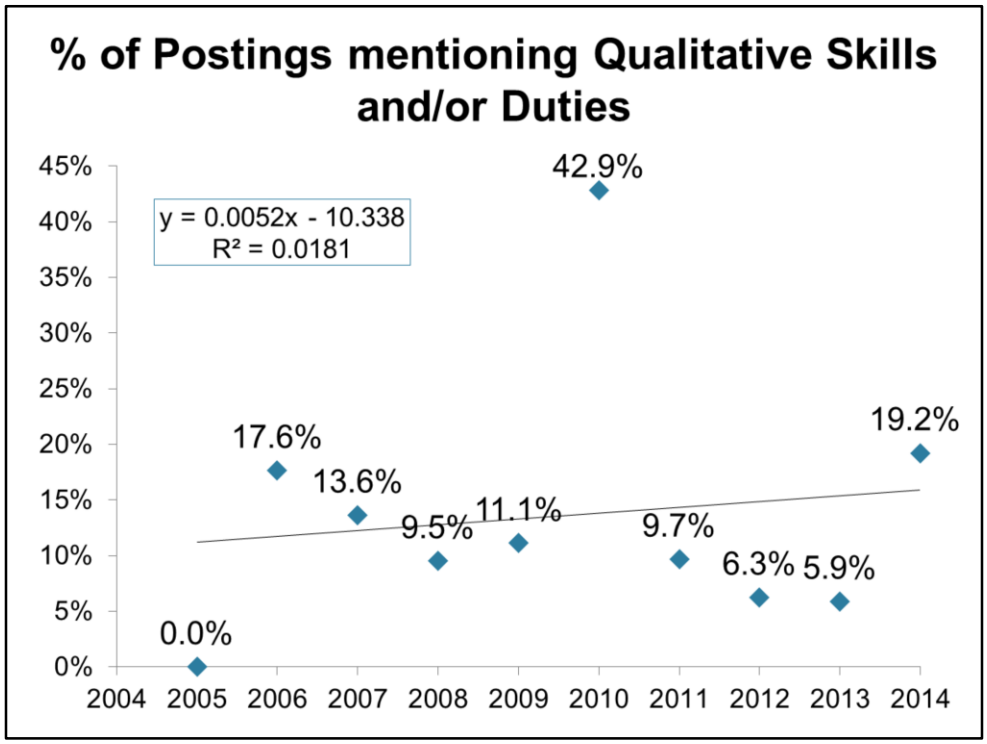


Next, I performed ten different targeted text search queries across the codable text fields of Job Description, Required Skills, and Preferred Skills to parse the inclusion of terms explicitly related to quantitative and qualitative data support (including mentions of specific quantitative and qualitative analysis software) – the Boolean search strategies for which I can share with you if you are interested via email – and coded them accordingly as these Nodes.

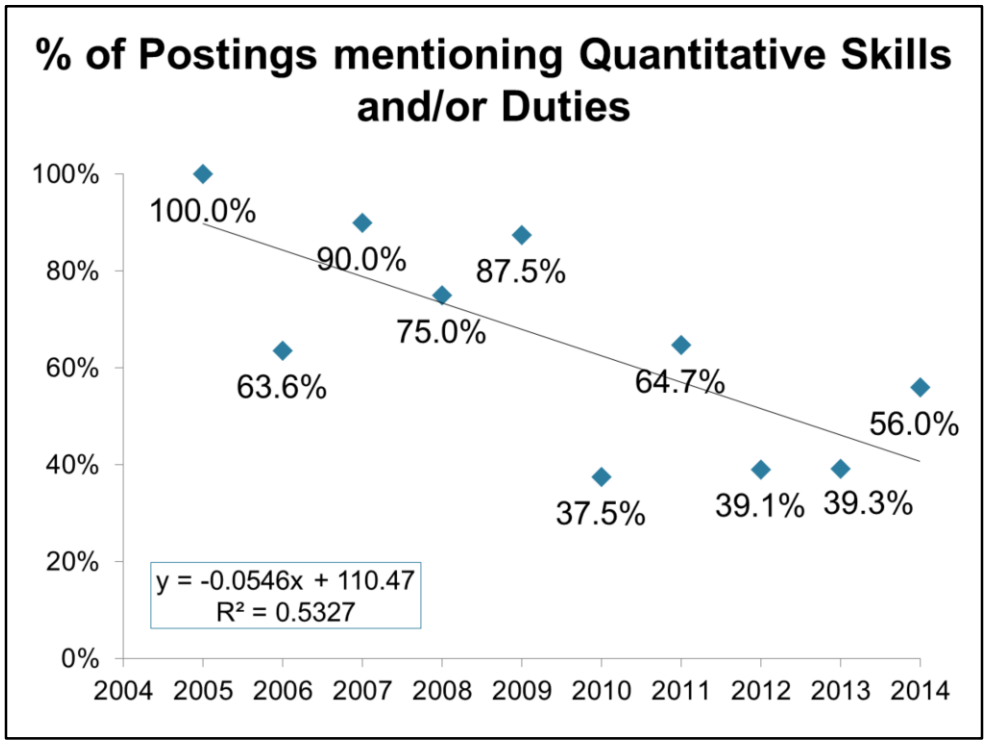
Postings by Quantitative/Qualitative Distinctions (N=270)

Mentions of:	Frequency	%
Qualitative AND Quantitative	31	11.5%
Qualitative	34	12.6%
Qualitative NOT Quantitative	9	3.3%
Quantitative	154	57.0%
Quantitative NOT Qualitative	140	51.9%

I fount that while only 34 (12.6%) of the job postings specified qualitative data services as a component of the job, 154 (57.0%) mentioned quantitative data services. Similarly, the job postings were comparatively more likely to mention skills/duties related to quantitative data services in exclusion of qualitative (N=140, or 51.9%) then they were to mention the reverse of skills/duties related to qualitative data services in exclusion of quantitative (N=9, or 3.3%).

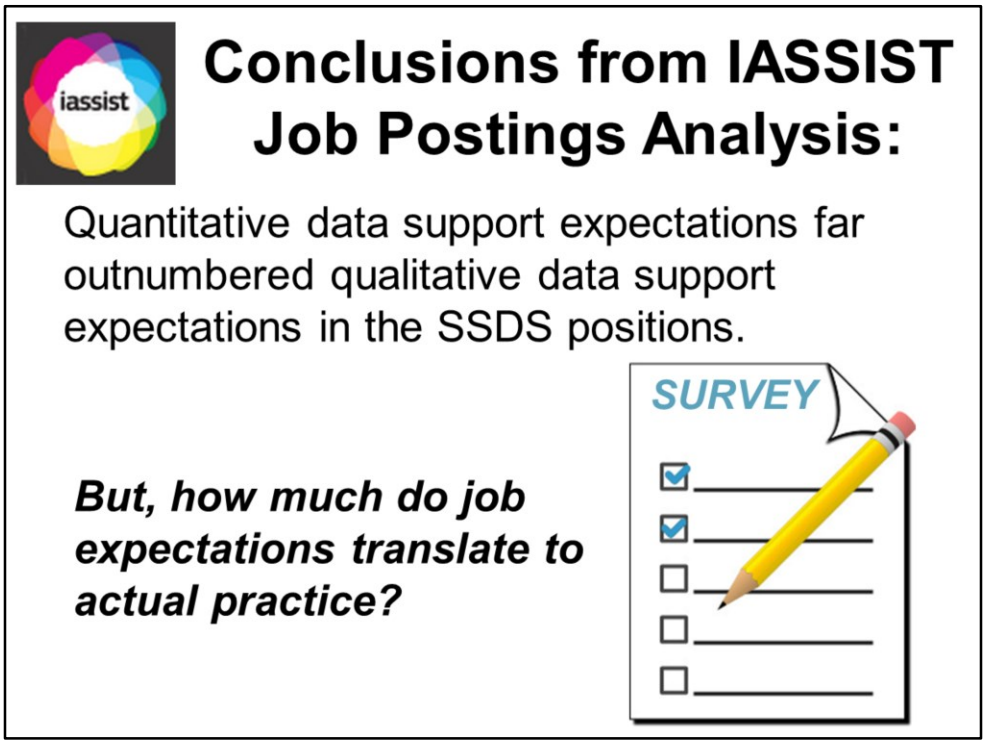


Exploring trends over the 2005-2014 time frame, I found that, withstanding the outlier year of 2010, the percentage of postings mentioning qualitative skills remained relatively stable from 2005 to 2014 with no consistent upward or downward trend.



In contrast, there was a fairly consistent downward trend from 2005-2014 in relation to the job postings specifically mentioning quantitative skills/duties – reflecting a decreasing average rate of 5.88% per year.

However, even with this downward trend, there is still a clear dominance of quantitative over qualitative distributed over the examined time period: an annual average of 65.3% of the postings mentioned quantitative skills, as compared to an annual average of 13.6% mentioning qualitative skills.



Conclusions from IASSIST Job Postings Analysis: Quantitative data support expectations far outnumber qualitative data support expectations in the SSDS positions. But, then my next question was: ***How much do job expectations translate to actual practice?***

Hence, my survey of social sciences librarians/data-support professionals was aimed at gauging: (1) their expected skills/duties and their background/training regarding supporting quantitative and qualitative data/research; (2) the types and frequency of quantitative/qualitative data support they provide and the reasons they do not provide certain types of data support services; and (3) their thoughts regarding the relevance of qualitative as compared to quantitative data/research for the future of data support services. My ultimate aim was to see if the survey data reflected the same overall finding of my job postings analysis: a dominance of quantitative over qualitative data support. Further, I was hoping to tease out the rationales/reasons behind why this was the case.

Question: Which of the following best describes you? **N=112**		
	Frequency	**%**
Data Services Librarian with responsibilities to the social sciences.	23	20.5%
Social Sciences Librarian with explicitly-defined data services responsibilities.	10	8.9%
Social Sciences Librarian without explicitly-defined data services responsibilities.	60	53.6%
A non-librarian with data services responsibilities to the social sciences.	11	9.8%
Other. (7 AcLib., 1 PhD Student)	8	7.1%

I constructed and administered the mixed-methods survey via the Qualtrics online survey platform. An invitation to participate in the survey was distributed via various email listservs.

112 participants completed the survey, and as you can see, the majority were social sciences librarians without explicitly-defined data services responsibilities, followed by dedicated data services librarians with responsibilities to the social sciences and social sciences librarians who also had explicitly-defined data services responsibilities.

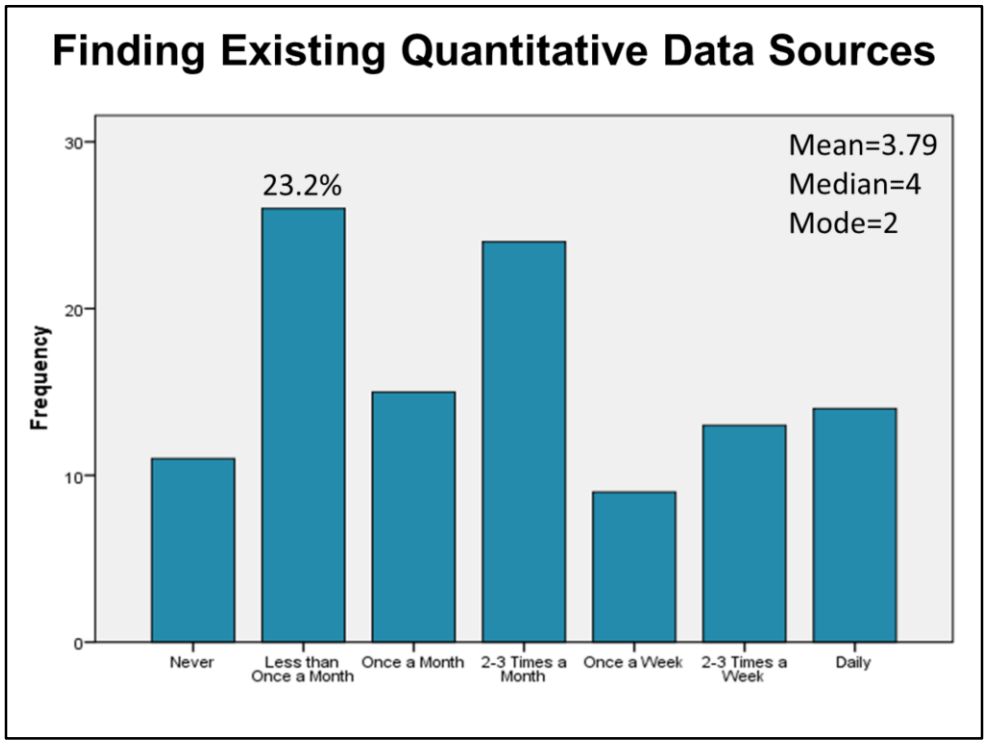
Question: Think about the JOB ADVERTISEMENT for your current position when answering the questions below.			
		Yes	**No**
Did it REQUIRE that you have experience supporting and/or using:			
	Quantitative data?	31 (27.7%)	77 (68.8%)
	Qualitative data?	10 (8.9%)	96 (85.7%)
Did it EXPLICITLY list that the job would include support services responsibilities for:			
	Quantitative data?	34 (30.4%)	69 (61.6%)
	Qualitative data?	13 (11.6%)	87 (77.7%)

This question was directly informed by my IASSIST job postings analyses. As this table illustrates, the majority of participants reported that their current position's job posting did not explicitly stipulate nor imply any required/preferred skills and/or duties to support quantitative or qualitative data. However, more participants reported that their current position's job posting required them to have experience supporting/using quantitative data over qualitative data and explicitly listed that the job duties would include support services for quantitative data over qualitative. Thus, this dominance of quantitative over qualitative in the job postings for the survey participants' current positions, although less pronounced, echoes my findings from my analysis of the IASSIST job postings.

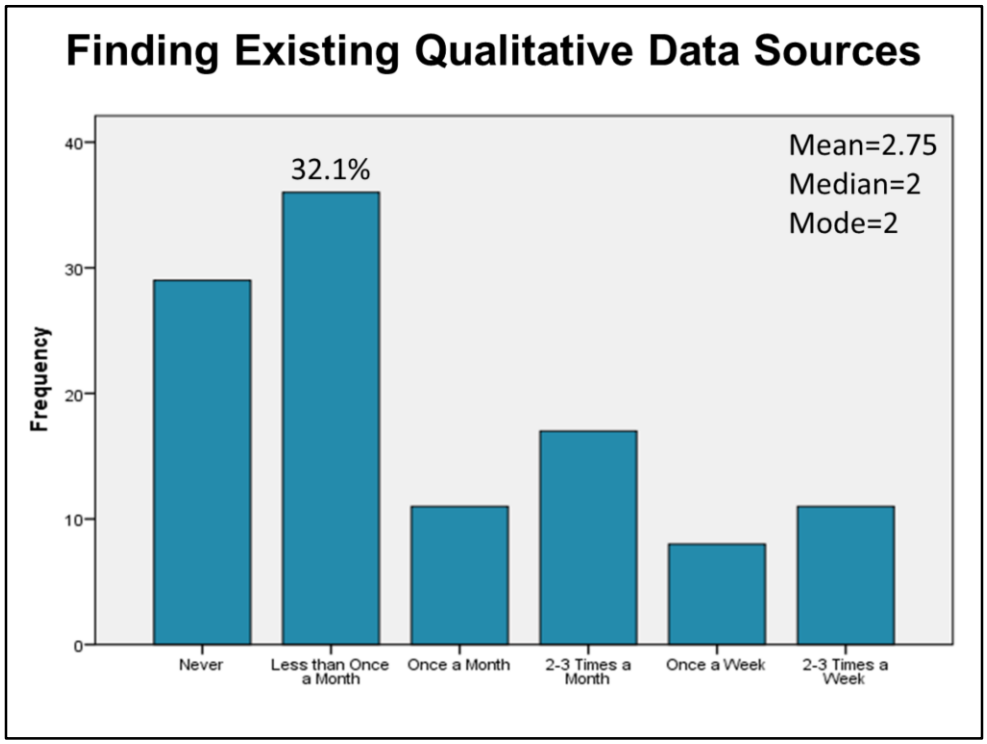
Question: Thinking about a typical academic semester, please rate the frequency of your providing consultations and/or instruction sessions for the listed data support activities. SCALE: Never (value=1); Less than Once a Month (value=2); Once a Month (value=3); 2-3 X a Month (value=4); Once a Week (value=5); 2-3 X a Week (value=6); Daily (value=7)	
Finding existing data sources of [quant/qual data]:	**Constructing/understanding data files with [quant/qual data]:**
Software training for analyzing [quant/qual data]:	**Making data visualizations of [quant/qual data]:**
Collecting new or original [quant/qual data]:	**Performing analysis on [quant/qual data]:**
Data management, sharing, and/or curation of [quant/qual data]:	

Two survey questions asked the participants to report the frequency in a typical semester of their providing consultations and/or instruction sessions related to seven distinct types of data support activities, with one question directed at quantitative and the other at qualitative data support activities. The frequency scale ranged from Never (value=1) to Daily (value=7). My construction of these different types of data support activities were informed by Geraci, Humphrey, and Jacobs's "levels of [data] reference services," Xia and Wang's synthesized data life cycle model, the UK Data Archives "research data lifecycle," and my own experiences of providing data services support.

Perhaps not surprisingly, the participants more frequently reported engaging in finding existing data sources for both quantitative and qualitative data as compared to all the other types of data support activities. This echoes Xia and Wang's findings that "social sciences data professionals are still performing traditional primary services in the stages of data discovery."



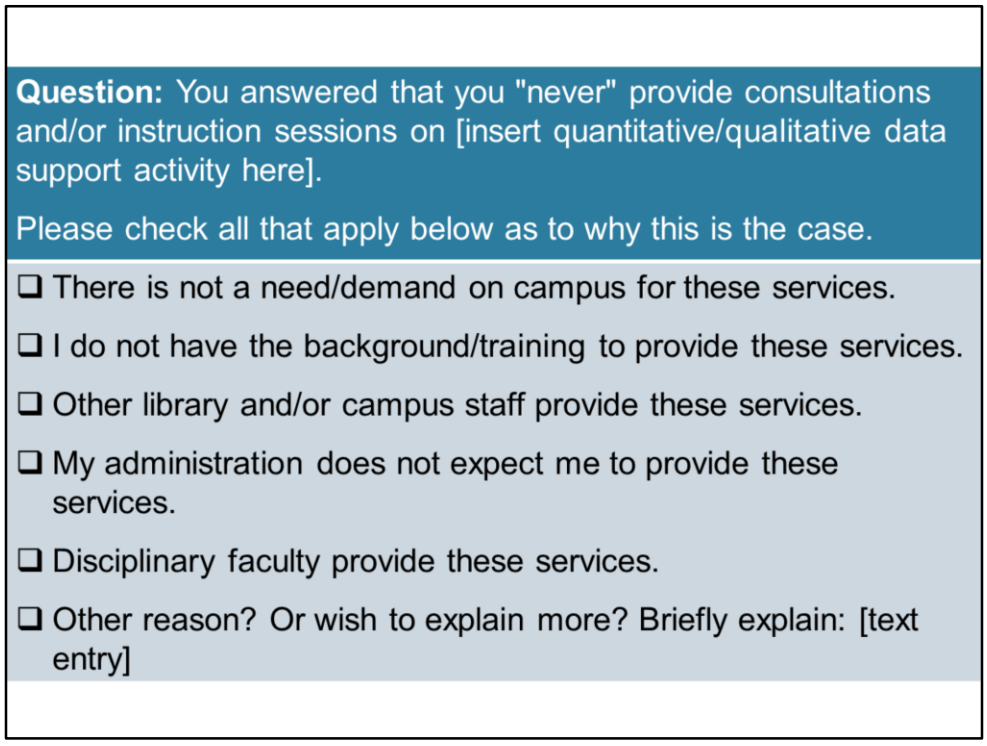
Still, the participants' responses indicated a dominance of this support type for quantitative data when compared to qualitative: they averaged a higher frequency of helping users find existing quantitative data sources (mean=3.79, or approaching 2-3 times a month) as compared to qualitative (mean=2.75, or approaching once a month); the median for helping users find existing quantitative data sources was 4 (2-3 times a month) as opposed to 2 (less than once a month) for qualitative, indicating that participants' responses for this quantitative data support activity were skewed towards providing it more frequently than when reporting on the corresponding qualitative data support activity; and while both the modes, or most frequently occurring response value, were 2 (less than once a month), 32.1% of the participants reported helping users find existing qualitative sources less than once a month as opposed to 23.2% for quantitative sources.



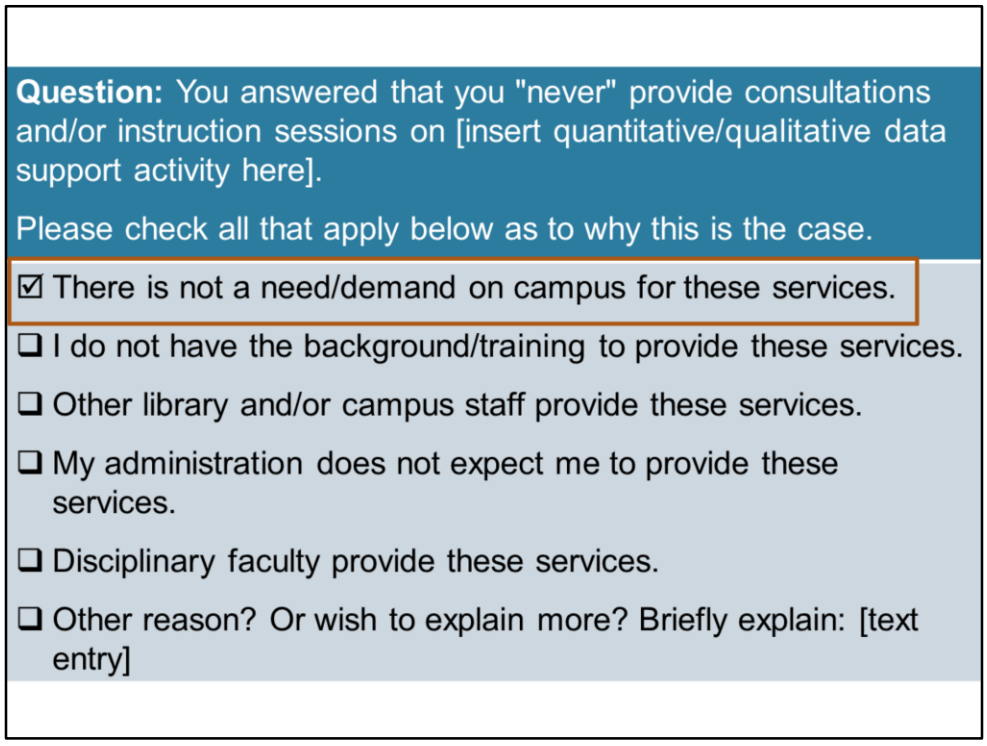
Gauging from some of the "never" open-ended text entry comments for this data support activity, that quantitative dominated qualitative is likely reflected by some participants' assumptions that "finding existing data sources of qualitative data" necessarily meant finding secondary interviews, ethnographic field notes, etc. (and not other source materials for qualitative analysis such as policies, textual or audiovisual or visual media, historical primary sources, etc.) and, consequently, that little reusable, archived, secondary qualitative data exists. My later discussion of the open-ended text entry questions will further elucidate my interpretation of the underlying assumptions about qualitative data these textual comments reveal.

N and % answering "never" re: providing consultations and/or instruction sessions on:	
Finding existing data sources of: Quantitative data (11, 9.8%) Qualitative data (29, 25.9%)	**Constructing/understanding data files with:** Quantitative data (45, 40.2%) Qualitative data (56, 50.0%)
Software training for analyzing: Quantitative data (69, 61.6%) Qualitative data (79, 70.5%)	**Making data visualizations of:** Quantitative data (63, 56.3%) Qualitative data (74, 66.1%)
Collecting new or original: Quantitative data (68, 60.7%) Qualitative data (65, 58.0%)	**Performing analysis on:** Quantitative data (65, 58.0%) Qualitative data (67, 59.8%)
Data management, sharing, and/or curation of: Quantitative data (46, 41.1%) Qualitative data (61, 54.5%)	

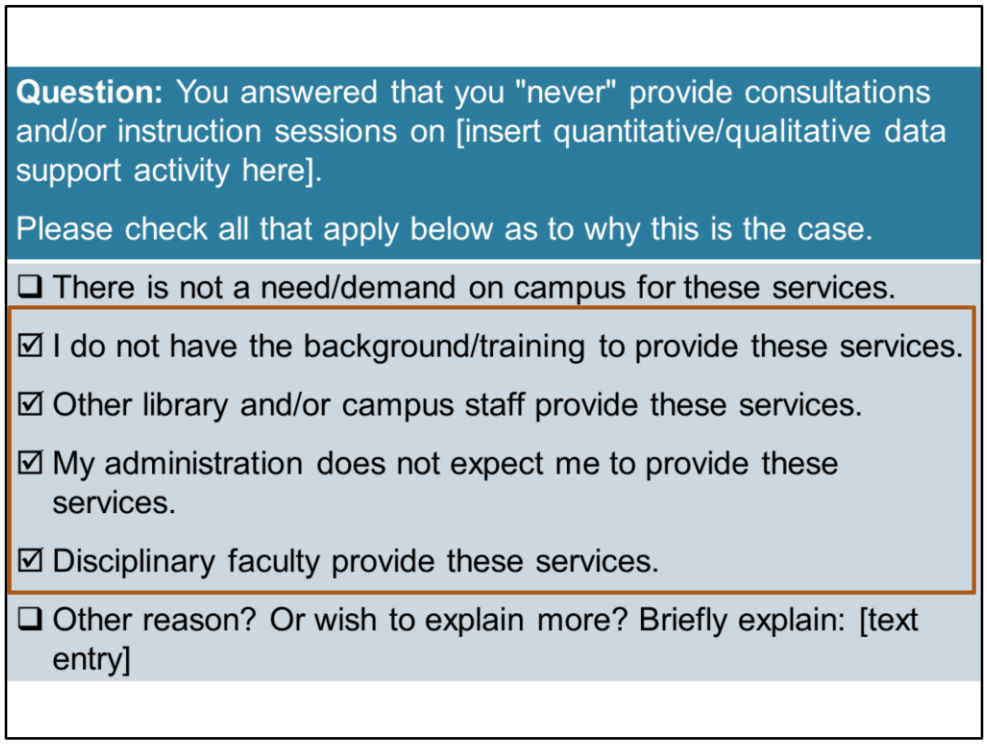
Excluding only the finding existing data sources activity, the most frequent response (mode) was "never" for the remaining data support activities – whether quantitative or qualitative – thus indicating that these levels/kinds of service were a rarity, and particularly for software training, data visualization, collecting new/original data, and performing data analysis. We can see that for the collecting new or original data and performing analysis on data activities that quantitative and qualitative were pretty even. And, with the exception of collecting new/original data (and the difference was minimal), more participants reported not providing the individual support activities for qualitative then quantitative data – with the biggest number differences occurring for finding existing data sources and data management, sharing, and/or curation of data sources.



To explore the reasons for why participants reported “never” having provided a specific data support activity, I used display-logic so that a “never” response for a data-support activity routed participants to questions asking them to select from these reasons as to why that was the case, including an open-ended text entry option to expound upon their checked reasons and/or to describe other reasons.

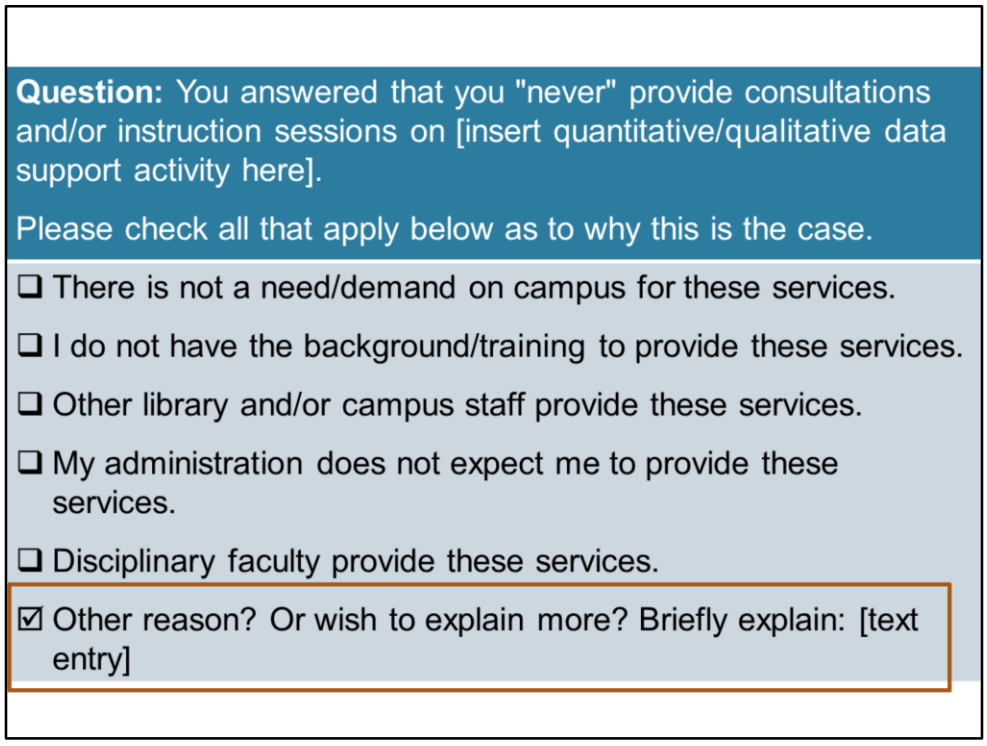


Participants were least likely to say that there was no need/demand on campus for all the data support activities – regardless of whether reporting on quantitative or qualitative data. However, for six of the seven data support activities (the exception was constructing and/or understanding data files), participants were more likely to say there was no need/demand when reporting on qualitative as compared to quantitative data – although the differences were minimal.

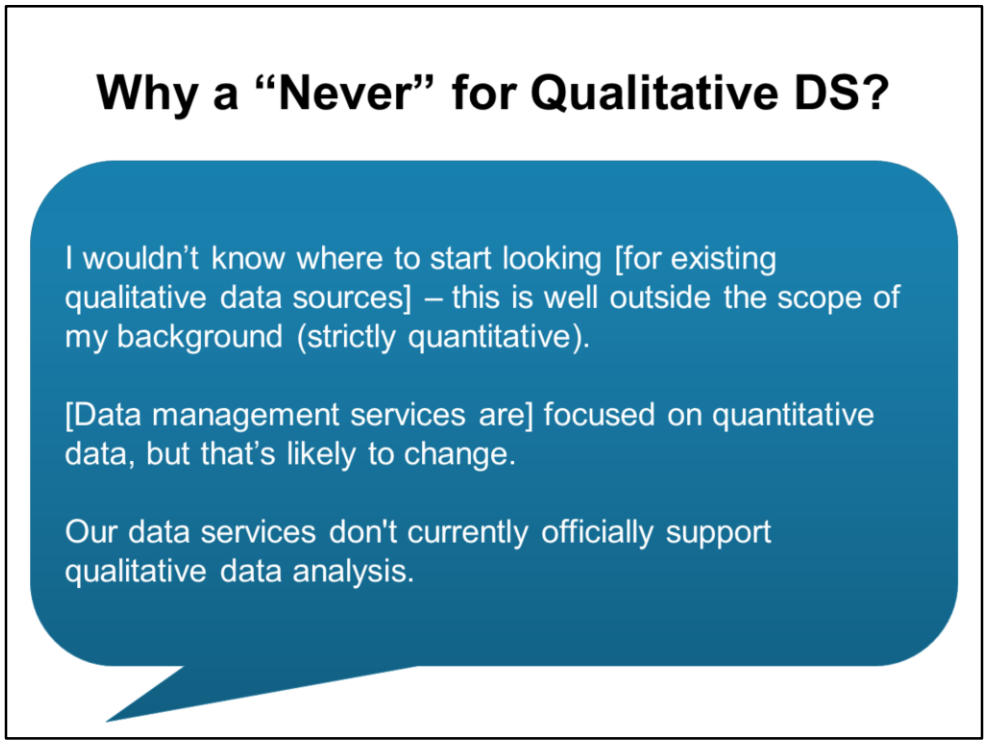


Regarding the data support activities of constructing/understanding data files, software training, collecting new/original data, and performing data analysis, it perhaps comes as no surprise that, for both quantitative and qualitative data, participants were more likely to report that faculty provide these services, typically followed by their reporting they did not have the background/training to provide these services nor were there any expectation for them to do so, or that other library/campus staff provided these services – and the disparity when comparing quantitative and qualitative was minimal.

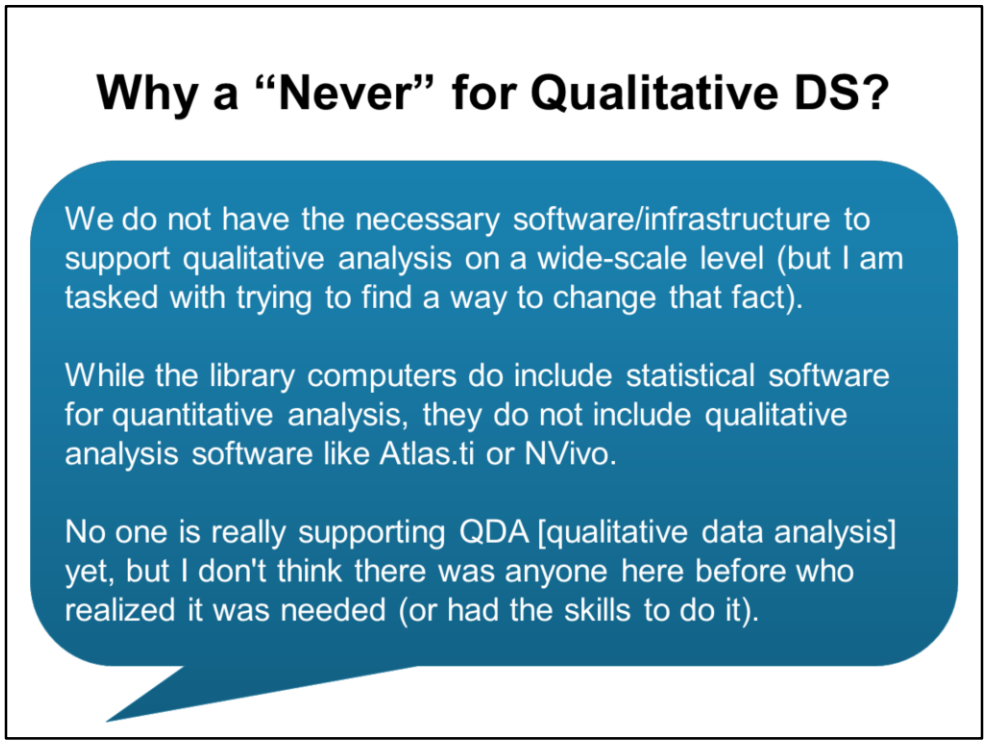
This pattern shifted, however, for the data visualization activity, with participants more likely to report that they had no background/training to provide this service, and then typically followed by their reporting that there was no expectation for them to provide it and that other library/campus staff or faculty provided it – but again showing little disparity between quantitative and qualitative.



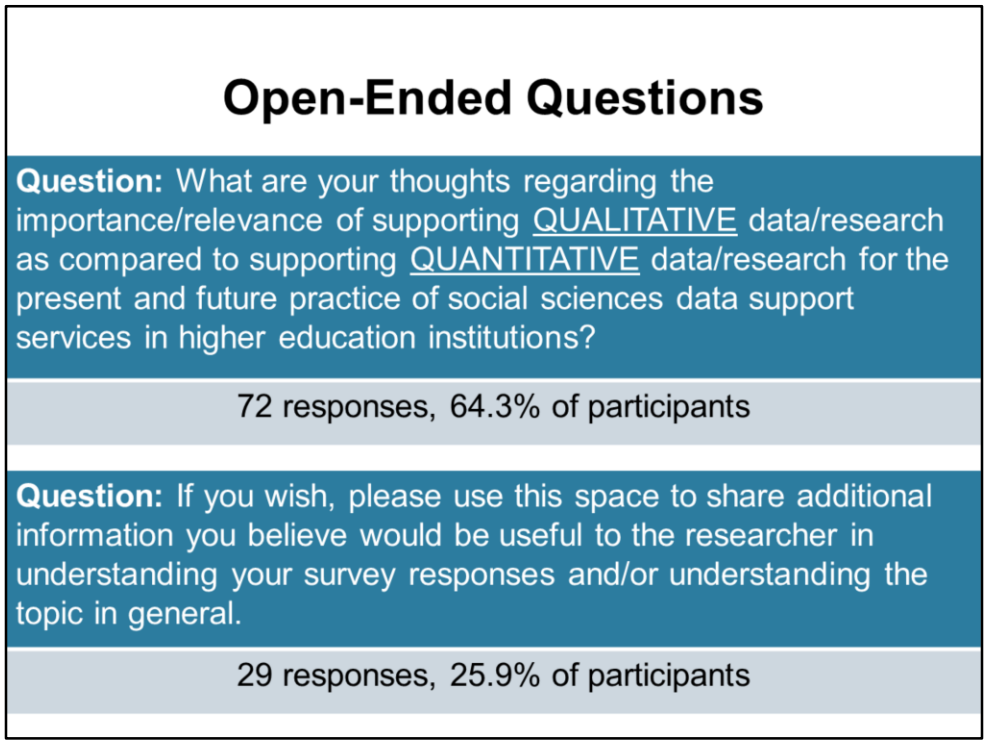
In the open-ended text responses of "other" for why participants never provided certain data support activities, for both quantitative and qualitative data, participants often elaborated on and/or reiterated the reasons they had already selected.



However, I found the following excerpts interesting in terms of the quantitative-qualitative divide.

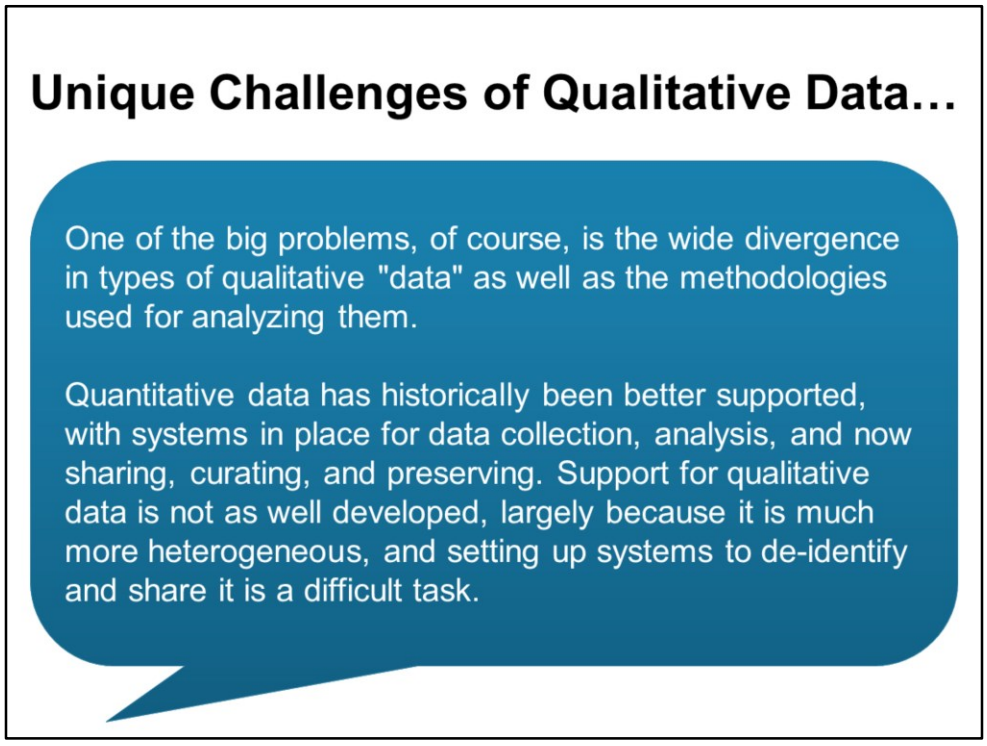


These excerpts reinforced the general findings thus far presented: that quantitative data support services appear to be the dominant focus of social sciences data support services at this time – although some acknowledged that future services might include a qualitative focus.

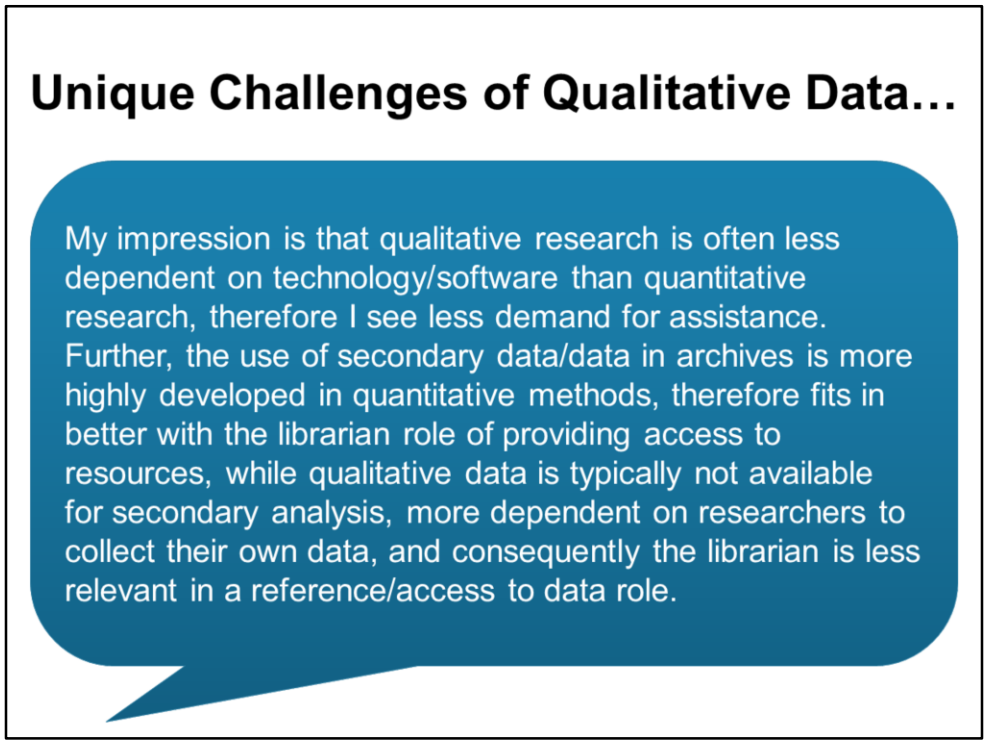


These open-ended questions were the final survey questions.

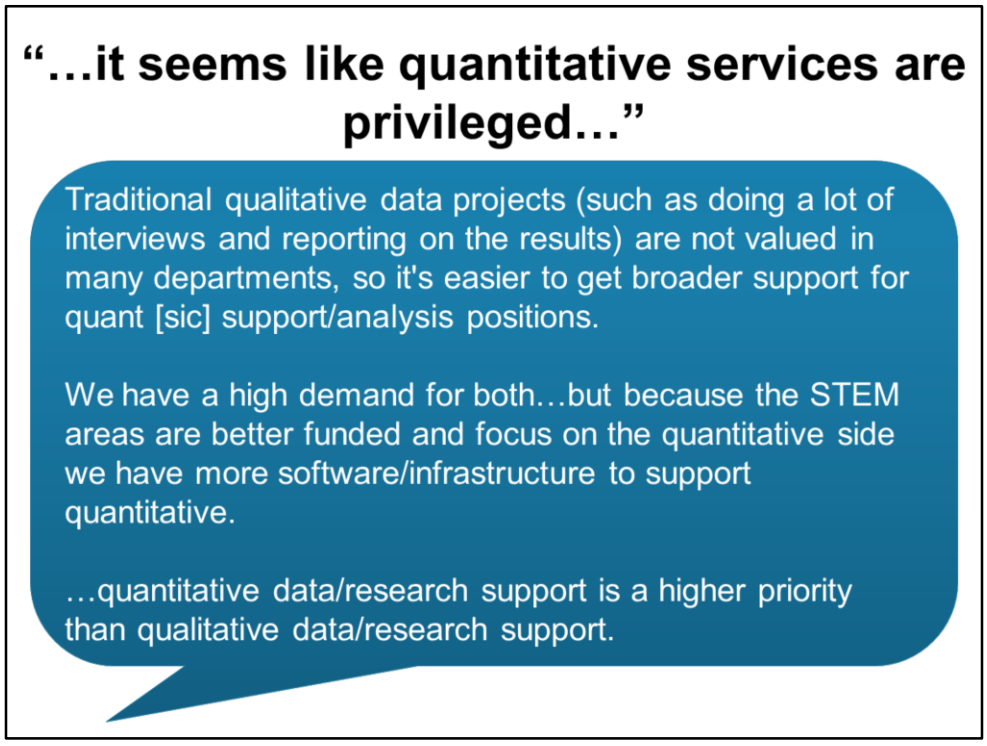
Almost all of the participants who responded to these questions unequivocally stated that supporting both quantitative and qualitative data/research was important. Similarly, a recurring theme was that data support services offerings should be guided by the local needs of the institution's researchers – and thus if quantitative was the predominant need, then that should be the primary focus, and vice versa for qualitative. That said, many of respondents openly acknowledged that quantitative probably gets more attention at present – some again indicating that this often reflected the specific needs of an institution.



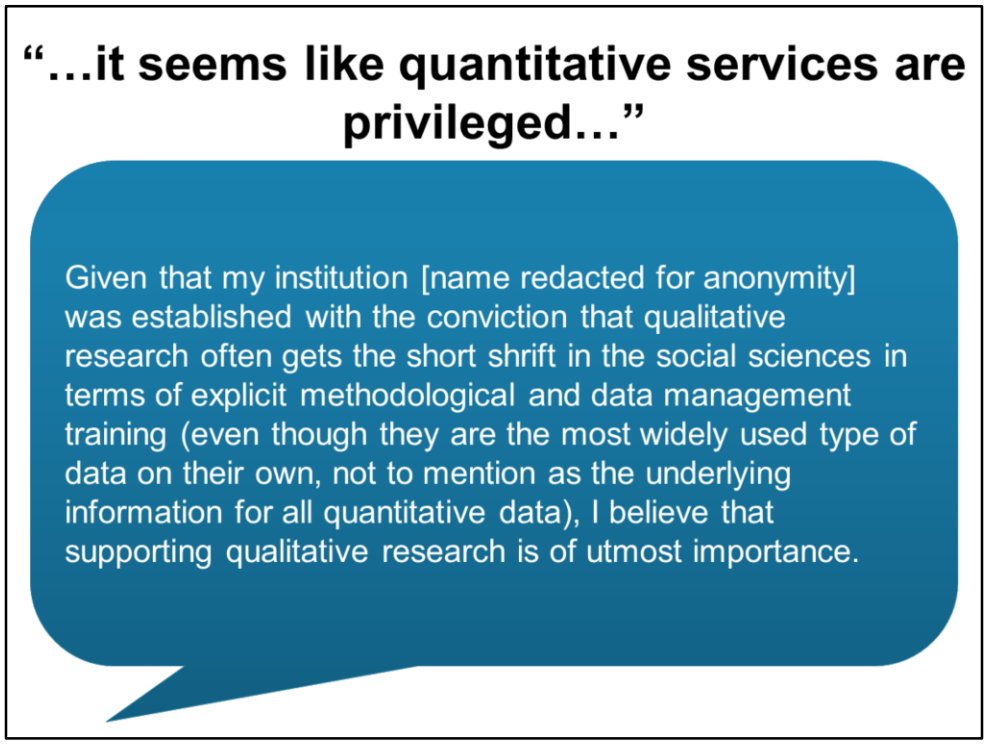
Likewise, some alluded to a uniqueness of qualitative data that did not lend itself to and/or posed specific challenges to traditional roles of data support, as the following excerpts exemplify.



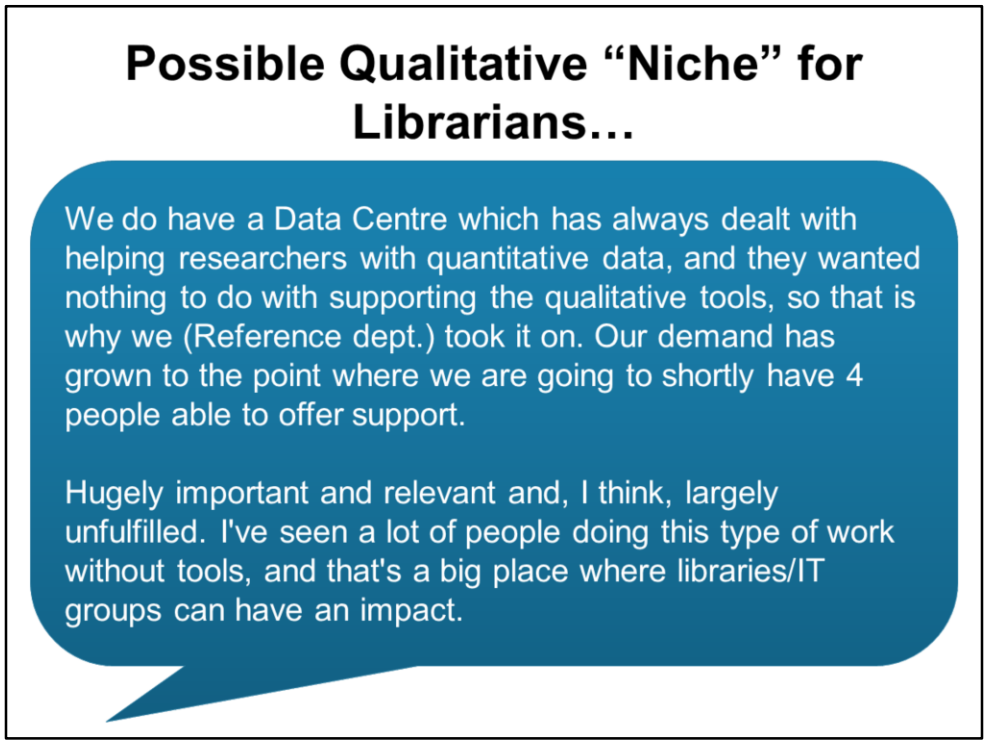
I find the last excerpt above most interesting, as I think it reveals a narrow interpretation of what is/is not qualitative data sources, what types of analysis researchers might perform on qualitative data, and what technologies qualitative researchers might employ for these analyses. Consequently, this narrow interpretation – perhaps stemming from a lack of experience and/or expectation for supporting qualitative researchers – leads the respondent to offer a very traditional and proscriptive role for librarians to play in supporting qualitative researchers' data needs.



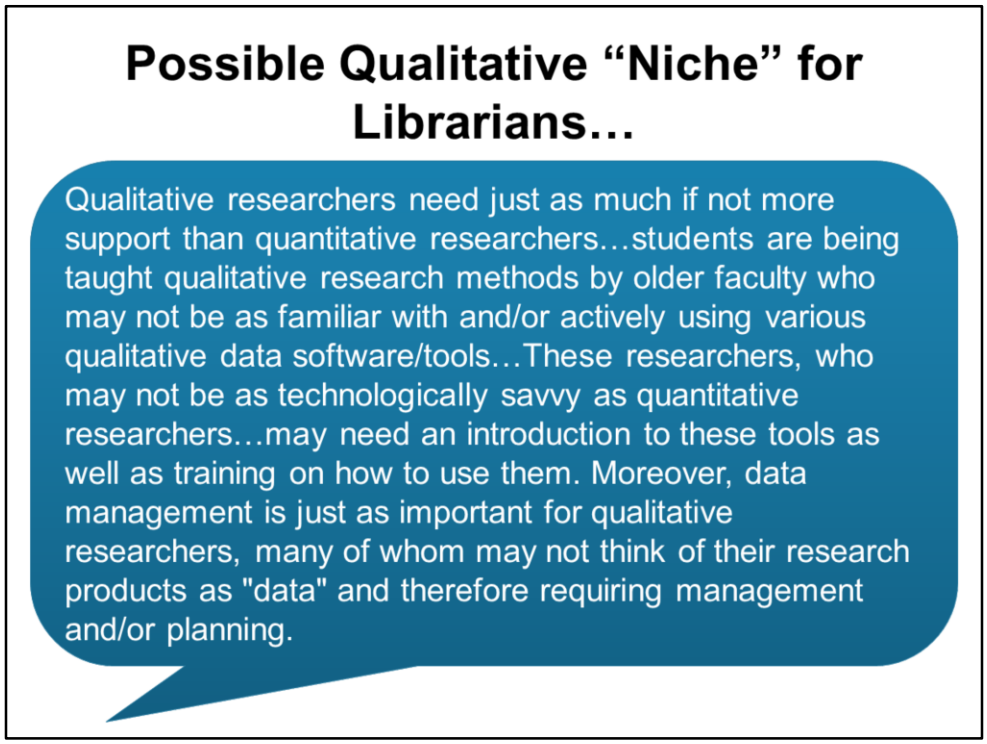
Furthermore, a few participants' responses reveal a sense that quantitative data/research support does indeed hold a "privileged" status currently – the title of this and the next slide is an actual quote from a survey participant.



Interestingly, a handful of respondents pointed to the increasing digitization of qualitative sources and thus the more-readied ability to *quantify* this data for statistical or text-mining analysis as the impetus for increasing demand for "qualitative" data support services – thus, in my interpretation, reiterating the privileged status of quantitative research over qualitative.



Several respondents also pointed to the possibility for librarians to seize the opportunity to fill this presumed void in qualitative research support and thereby create a particular "niche" for themselves – and these excerpts give examples of how this could be or is already happening in some libraries.



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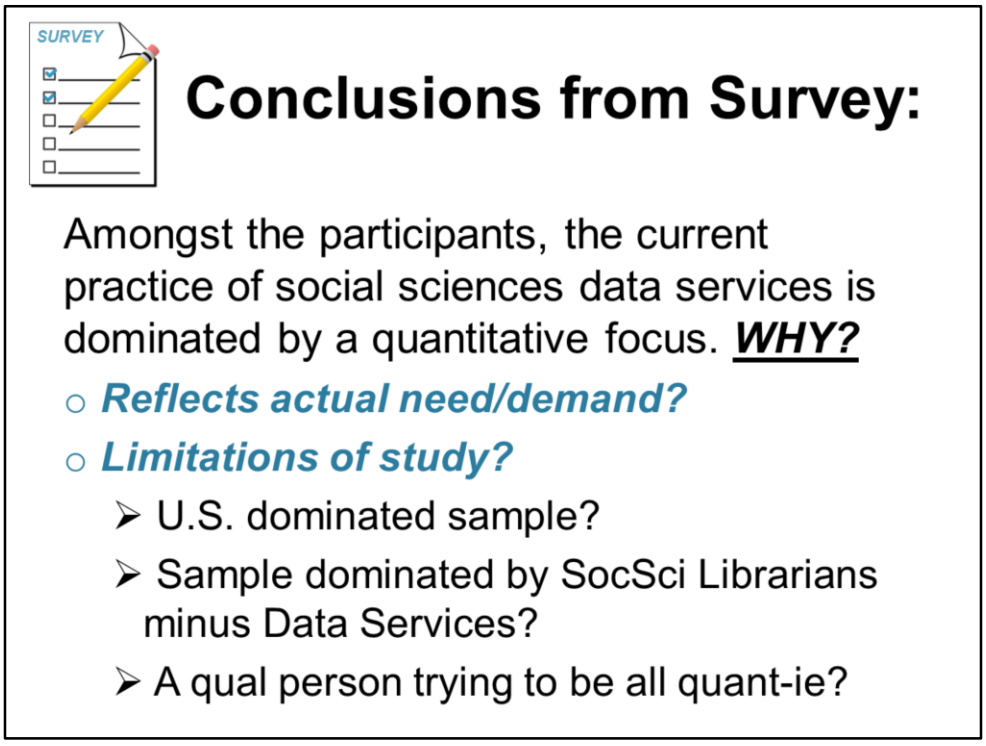
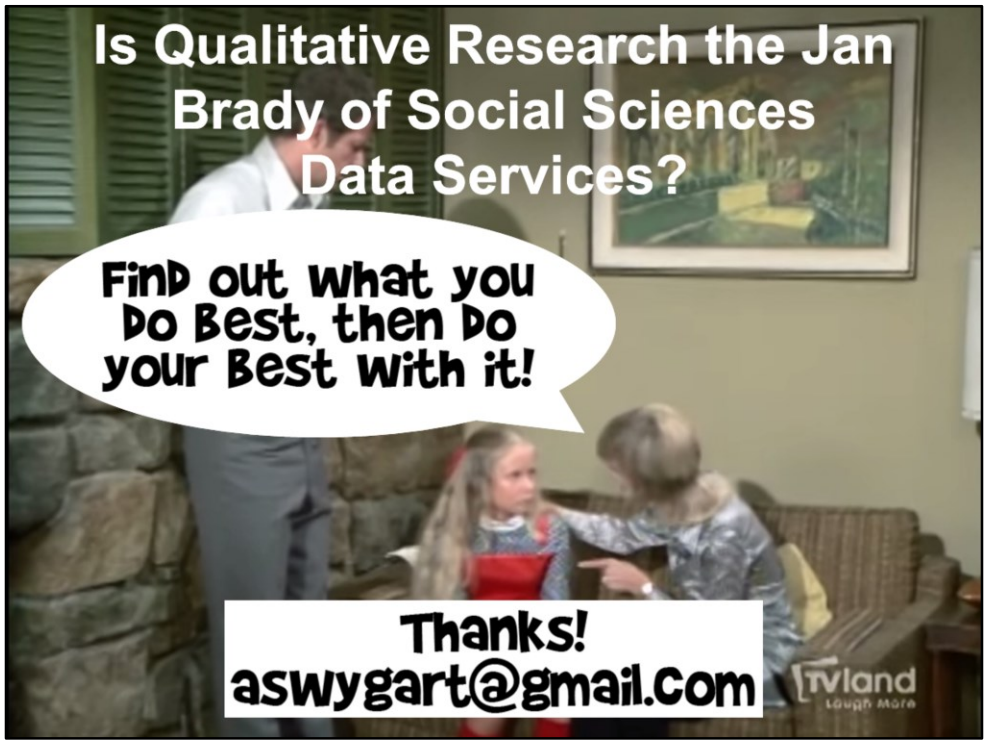


Thus, my survey results echoes that from my IASSIST job postings analysis: amongst the participants, the current practice of social sciences data services is dominated by a quantitative focus. However, I cannot draw clear-cut, causal conclusions as to why this is the case, but I will offer some speculations. It could just reflect that the need/demand for quantitative research support outweighs qualitative data support. My survey sample included mostly United States participants (99, or 88.4%), and there is some literature suggesting that United States social sciences researchers are heavily quantitative; thus, if local demand is what primarily drives data support services, presuming there is a predominantly quantitative base of researchers would point to making quantitative data support services the priority. Likewise, consider that 68 (or 60.7%) of the librarian participants reported not having explicitly-defined data services responsibilities, as compared to 23 (or 20.5%) librarians reporting that social sciences data services was their primary focus. Thus, had I a larger sample of librarians whose positions entailed solely providing social sciences data services, my cumulative results likely would have been different – and, I hypothesize, would have demonstrated a more pronounced dominance of quantitative over qualitative as was illustrated in my earlier analysis broken down by job type. Moreover, I must acknowledge that there are limitations to my survey construction and overall methodology that could be improved in future studies – and, these limitations largely stem from my epistemological inclination toward qualitative research. Were I to explore this quantitative-qualitative split in future research, I would opt for in-depth interviews with social sciences data services librarians via which I would deconstruct the discourses surrounding data services provision and what these reveal about this quantitative-qualitative divide, professional identity, and boundary constructions amongst data services professionals.



So, I return to my original question: Is qualitative research the Jan Brady of social sciences data services?

From my analyses, there does appear to be a dominance of quantitative data support over qualitative data support amongst social sciences librarians – but to attribute that to some conspiracy against qualitative researchers would be ill-advised. More research is needed to examine the root of this imbalance. Is it, in fact, attributable to a lack of demand and/or expectation for qualitative research support? Or could it be ascribed to social sciences librarians' lack of knowledge/awareness that qualitative researchers do, in fact, have data support needs to be filled? As one participant in my survey described – and as I can concur from my own experiences – when much of the campus is invested in supporting quantitative researchers, librarians might carve a successful niche for themselves in serving the qualitative researchers that are perhaps being neglected. At present, qualitative research support may be the Jan Brady of social sciences data services. But, just as her mom advised Jan to "find out what you do best, and then do your best with it," perhaps qualitative research support is our particular place to shine.