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Bibliometric Mapping of Emotional Labor Studies in Public Administration

Chih-Wei Hsieh – City University of Hong Kong Mary E. Guy – University of Colorado Denver Daan Wang – City University of Hong Kong

Although emotional labor is increasingly recognized as an essential element in public service delivery (and more generally in the citizen—state encounter), research into emotional labor is at an incipient stage. Therefore, to aid theory development and empirical testing, in this article we use bibliometric mapping to reveal the intellectual networks and paths that emotional labor research has followed in its early diffusion into the field. Four network maps are drawn: one showing the co-authorship network of emotional labor studies, one showing the co-citation network, one showing the network of co-cited scholars, and one showing keyword co-occurrence. These maps reveal gaps that enable and encourage future researchers to move forward with further investigation and theory building. Additionally, this article serves as a model for how other subfields of inquiry can be similarly mapped and how this technique can be used to reflect the diffusion of knowledge within and across disciplines.

Keywords: Emotional Labor, Bibliometric Mapping, Knowledge Diffusion, Network Analysis

The Affective Turn

Decades ago, after observing how flight attendants dealt with frightened, hungry, thirsty, and demanding passengers, sociologist Arlie Hochschild (1983) coined the term "emotional labor" to conceptualize the emotive aspect of service work. The focus of her work was on business enterprises where the quality of the employee–customer relationship determines whether there will be repeat transactions. This concept is especially relevant in public service, where the citizen–state encounter often involves emotions far more intense than those encountered in a sales relationship. The power of the state can enrage citizens, especially in instances when it takes people's freedoms away, results in police arrests, when zoning officials enforce unpopular restrictions, or when caseworkers remove a child from abusive parents. The state also provides lifesaving services in the midst of chaos and panic, such as in emergency response and disaster management.

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Whether constraining freedoms or responding when citizens are panicked, public service workers must manage their own emotive state while also managing the emotions of citizens. They must do so either to achieve compliance or to calm and reassure victims of tragedy. Thus, emotional labor is an important element of public service delivery, and its role has warranted both theoretical and empirical attention. Indeed, there has been an affective turn in public administration scholarship.

The citizen—state encounter, an event highlighted by Charles Goodsell (1981) and more recently by Koen Bartels (2015), requires the management of feelings. If the affective component of public service is to be rendered successfully, workers must manage their own emotions as well as the emotional state of the citizen. This work ranges from authentically displaying one's own feelings to donning a mask so that the emotion displayed is not what is actually being experienced. For example, the firefighter who is running into a burning building while others are running out of it must display confidence, not fear. The caseworker investigating a complaint of child abuse must display neutrality, not horror. The public information officer must display warmth, compassion, and confidence in front of a microphone while delivering horrific accounts of crimes, floods, and accidents. In other words, public service work requires energy and focus and an embrace of human emotion. As Dubnick (2018) has pointed out, public administration theories should be more "sensitive and responsive to reflexive and emotional human beings as well as the complexities and chaos of social life" (p. 100).

Conceptual Development

When public service delivery requires workers to engage in face-to-face or voice-to-voice exchanges with citizens, successful performance of this work hinges not only on how they detect the other's state of mind and heart but also on how they adjust their own affective state and exhibit situationally appropriate emotions (Guy, Newman, & Mastracci, 2008). Even though public service practitioners are well aware of the ubiquity of emotional labor, scholars have been reluctant to acknowledge that which cannot be easily counted. Without sullying their work with the word "emotion," most scholars who focus on frontline services write around the subject by explaining how workers must "manage" or "cope" in service exchanges (Lipsky, 1980; Maynard-Moody & Musheno, 2003; Tummers, Bekkers, Vink, & Musheno, 2015).

Over time, however, a handful of scholars have helped to overcome the field's reluctance to using the word "emotion." Catching up with what practitioners have long known, scholars are now delving into the antecedents, correlates, and consequences of emotional labor in the public service. Leading the way are Mary Guy and Meredith Newman whose 2004 article, *Women's jobs, men's jobs: Sex segregation and emotional labor,* marked the beginning of emotional labor studies in public administration (Guy & Newman, 2004). After more than a decade of development, it is now time to take stock of the field's intellectual integration of emotional labor into theory and research.

Emotional Labor

Emotional labor is job-based and is required in order to perform one's work effectively. It involves managing one's own emotional state as well as managing the emotional state of the person with whom one is engaged in order to accomplish the job. To perform emotional labor, the worker goes through an almost instantaneous progression of the following steps:

1) sensing the other person's emotional state;

- 2) analyzing one's own affective state;
- 3) determining whether the other person's affect needs to change (e.g., from hysteria to calmness, such as in an emergency);
- 4) determining whether to suppress one's own emotional state (e.g., fear) in order to display another (e.g., calmness); and,
- 5) acting on these determinations in order to display the emotion that will elicit the desired response from the other person.

While the concept of emotional labor has primarily been studied within the context of retail sales and the hospitality industry (Grandey, 2000; Hochschild, 1983; Morris & Feldman, 1996), it is perhaps more germane to public service work. This is because the citizen—state encounter often occurs in emotionally charged situations due to the exercise of power and constraints on freedoms that can be imposed. Hsieh, Jin, and Guy (2012), therefore, analyzed emotional labor across a range of public service occupations. Mastracci, Guy, and Newman (2012) analyzed emotional labor among emergency response workers, while Jin and Guy (2009) analyzed emotional labor in the relatively emotionally benign setting of consumer complaint workers.

In the next section, we provide an overview of bibliometrics. In general, this type of analysis allows scholars to analyze extant studies, illuminate the connections among scholars who are investigating a topic, and assess linkages between research foci. Thus, bibliometric analysis provides us with a means for investigating the evolution, diffusion, and integration of emotional labor scholarship into public administration research.

Bibliometric Analysis

Bibliometric analysis, also known as scientometrics, provides a statistical means for analyzing scientific literature. It does so by providing the tools to gauge a discipline's publications and research topics (Osareh, 1996). The method is used to study the body of a given literature and it generates results in various ways, including co-occurrence relationships among keywords, co-authorship collaborations among researchers, co-citations (i.e., relationships among publications, journals, and/or researchers based on the frequency that they are co-cited), and bibliographic coupling networks, which are relationships among publications, journals, and/or researchers based on the frequency that they share the same references (Van Eck & Waltman, 2014). Ultimately, bibliometric analysis provides a tool to probe the evolutionary development of scientific knowledge (Garfield, 2004).

In public administration, bibliometrics has been used to examine publishing trends in journals (Goyal, 2017; Ni, Sugimoto, & Robbin, 2017), knowledge exchanges between disciplines (Vogel, 2014), and the diffusion of Christopher Hood's seminal article, *A public management for all seasons* (Chandra & Walker, 2018). However, bibliometrics has not yet been used to evaluate the degree and pattern of knowledge diffusion in emerging subfields of research within the broader field. Therefore, in this study, we use bibliometric analysis for two purposes: one substantive and the other methodological.

The substantive purpose of this study is to determine the extent to which emotional labor research has diffused through the field of public administration. The methodological purpose is to demonstrate the utility of bibliometrics in assessing the degree and pattern of diffusion of a research focus. The contribution of this work is therefore twofold. First, the bibliometric maps in this study reveal whose work has contributed to the current body of knowledge, whose work has influenced this research, and which subtopics have been studied. These maps also reveal remaining gaps that can enable and encourage future researchers to move forward with further

Studies identified through database Studies identified through other searching sources (Articles: n=865) (Articles: n=1; Books: n=2) Studies screened based on title and Studies excluded (articles published in nonpublic abstracts (Articles: n=866; Books: n=2) administration journals) (Articles: n=841) Studies full-text screened for Studies excluded (non-original eligibility studies) (Articles: n=45; Books: n=2) (Articles: n=25) Studies included in the review (Articles: n=20, Books: n=2)

Figure 1. PRISMA Flowchart for Study Selection

investigation and theory building. Second, this study serves as a model demonstrating how other public administration subfields of inquiry can be mapped to reflect the diffusion of knowledge within and across disciplines.

The sections that follow describe our analytic technique and present our findings in terms of coauthorship, co-citation, and keyword co-occurrence networks. This is followed by a discussion that identifies contributions of existing research, highlights gaps that have yet to be addressed, and explores the utility of bibliometric mapping for other subfields.

Method

The bibliometric data in this study were collected in early 2018 using the Social Science Citation Index (SSCI) in the Web of Science Core Collection database. Figure 1 outlines the steps of the study selection process, which adhered to the principles of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA, 2015). In accordance with PRISMA guidelines, multiple steps for searching and screening the data were conducted. In the first step, we used the keyword "emotional labor" for topical retrieval. There were 865 documents that met this selection criteria. Then, we narrowed our focus to original emotional labor research published in public administration journals.

We focused our analysis on the 47 public administration journals listed in the SSCI database to screen the 865 documents (see Appendix). For the purposes of this study, original emotional labor research was operationalized as research that presents new knowledge rather than existing knowledge. Pursuant to this criterion, commentaries, summaries, or reviews of existing findings that produced no novel contributions to the literature were deleted. Similarly, publications that did not focus on emotional labor as a central concept as well as publications that cited the relevant literature but did not elaborate on the subject or empirically examine it were deleted. Given that

 Table 1. List of Emotional Labor Studies in Public Administration with Year of Publication

1401	Author(s)	otional Labor Studies in Public Ac Title	Source	Туре
1	Guy, &	Women's jobs, men's jobs: Sex	Public Administration	Journal
1	Newman	segregation and emotional labor	Review, 2004, 64(3), 289-298	article
2	Mastracci, Newman, & Guy	Appraising emotion work: Determining whether emotional labor is valued in government jobs	American Review of Public Administration, 2006, 36(2), 123-138	Journal article
3	Meier, Mastracci, & Wilson	Gender and emotional labor in public organizations: An empirical examination of the link to performance	Public Administration Review, 2006, 66(6)	Journal article
4	Guy, Newman, & Mastracci	Emotional labor: Putting the service in public service	M. E. Sharpe Inc., 2008	Book
5	Newman, Guy, & Mastracci	Beyond cognition: Affective leadership and emotional labor	Public Administration Review, 2009, 69(1), 6- 20	Journal article
6	Hsieh, & Guy	Performance outcomes: The relationship between managing the "heart" and managing client satisfaction	Review of Public Personnel Administration, 2009, 29(1), 41-57	Journal article
7	Jin, & Guy	How emotional labor influences worker pride, job satisfaction, and burnout: An examination of consumer complaint workers	Public Performance & Management Review, 2009, 33(1), 88-105	Journal article
8	Hsieh, Jin, & Guy	Consequences of work-related emotions: Analysis of a cross- section of public service workers	American Review of Public Administration, 2012, 42(1), 39-53	Journal article
9	Hsieh, Yang, & Fu	Motivational bases and emotional labor: Assessing the impact of public service motivation	Public Administration Review, 2012, 72(2), 241-251	Journal article
10	Mastracci, Guy, & Newman	Emotional labor and crisis response: Working on the razor's edge	M. E. Sharpe Inc., 2012	Book
11	Guy, & Newman	Emotional labor, job satisfaction and burnout: How each affects the other	Human resource management in the public sector, 2013, pp. 132-150	Book chapter
12	Lu, & Guy	How emotional labor and ethical leadership affect job engagement for Chinese public servants	Public Personnel Management, 2014, 43(1), 3-24	Journal article
13	Sloan	The consequences of emotional labor for public sector workers and the mitigating role of self-efficacy	American Review of Public Administration, 2014, 44(3), 274-290	Journal article

14	Tomsich, & Guy	Perceptions of authority: How gender affects citizen ratings of judges	Administration & Society, 2014, 46(5), 471-495	Journal article
15	Hsieh	Burnout among public service workers: The role of emotional labor requirements and job resources	Review of Public Personnel Administration, 2014, 34(4), 379-402	Journal article
16	Wilding, Chae, & Jang	Emotional labor in Korean local government: Testing the consequences of situational factors and emotional dissonance	Public Performance & Management Review, 2014, 38(2), 316-336	Journal article
17	Yang, & Guy	Gender effects on emotional labor in Seoul metropolitan area	Public Personnel Management, 2015, 44(1), 3-24	Journal article
18	Guy, & Lee	How emotional intelligence mediates emotional labor in public service jobs	Review of Public Personnel Administration, 2015, 35(3), 261-277	Journal article
19	Mastracci, & Hsieh	Emotional labor and job stress in caring professions: Exploring universalism and particularism in construct and culture	International Journal of Public Administration, 2016, 39(14), 1125-1133	Journal article
20	Hsieh, Hsieh, & Huang	Self-efficacy as a mediator and moderator between emotional labor and job satisfaction: A case study of public service employees in Taiwan	Public Performance & Management Review, 2016, 40(1), 71-96	Journal article
21	Guy	Mom work versus dad work in local government	Administration & Society, 2017, 49(1), 48-64	Journal article
22	Cho, & Song	Determinants of turnover intention of social workers: Effects of emotional labor and organizational trust	Public Personnel Management, 2017, 46(1), 41-65	Journal article

the Web of Science database contains only SSCI publications, some original emotional labor studies do not appear (e.g., books written by Guy et al. [2008], Mastracci, Guy, & Newman [2012], and Mastracci & Hsieh [2016]). Therefore, in order to obtain a more accurate account of original emotional labor research in public administration, we conducted a search of non-SSCI publications using Google Scholar. These results were added to the data (see Table 1). Figure 2 displays the number of publications by year.

To analyze the bibliometric data we used VOSviewer, which is a free software developed by Van Eck and Waltman (2010). We used VOSviewer to facilitate network mapping. Network mapping is one of the key procedures in bibliometric analysis. This is a procedure that visualizes the connections in a corpus of work. Each network contains two types of information: nodes and edges. Nodes are publications, journals, authors, and keywords. Edges represent relationships and the strength of those relationships between pairs of nodes (Van Eck & Waltman, 2014).

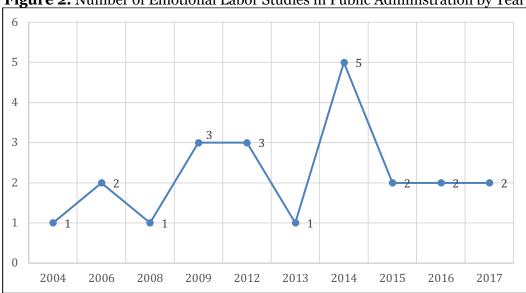


Figure 2. Number of Emotional Labor Studies in Public Administration by Year

Findings

This section presents three networks: co-authorship, co-citation, and keyword co-occurrence networks. These networks respectively reveal which authors have contributed to scholarly knowledge of emotional labor in public administration, those who have influenced this research, and what topics have been studied.

Co-Authorship Network

The first analysis shows the network of co-authors. There are 21 authors in total. In Figure 3, a node represents an author. The size of the node indicates how frequently the author's research appears in the collected data. The coloring of the node (using the color scheme illustrated in the legend) shows the average year of publications by a particular author. An edge between two nodes represents a co-authorship relationship for one or more publications in the data. In the network, the average number of collaborators with an author is 1.11.

The largest connected subgraph of Figure 3 is a group of 15 researchers. Within this group, there is an inner circle, consisting of Mary Guy, Meredith Newman, Sharon Mastracci, Chih-Wei Hsieh, and Myung Jin. As previously mentioned, Guy and Newman's (2004) article called attention to emotional labor in public service. Not long after, Mastracci joined the two researchers as their work probed this topic. Together, they pioneered emotional labor research by publishing books, book chapters, and journal articles.

As for Hsieh and Jin, they were doctoral students under Guy's supervision and both of them published their first emotional labor research with Guy in 2009. Together they produced another publication in 2012. Hsieh also co-published a comparative study on emotional labor with Mastracci in 2016.

Apart from this inner circle, 10 researchers joined the core group by working with the abovementioned authors. Elizabeth Tomsich, Seung-Bum Yang, Hyun Jung Lee, and Xiaojun Lu are all associated with Guy, while Kenneth Meier and Kristin Wilson are co-authors of Mastracci.

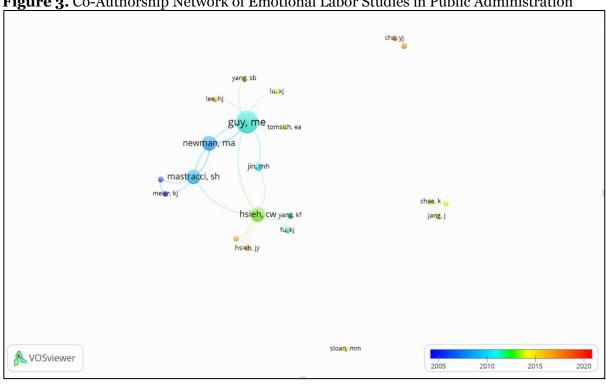


Figure 3. Co-Authorship Network of Emotional Labor Studies in Public Administration

Hsieh has co-published with two groups of scholars. One group consists of Kaifeng Yang and Kai-Jo Fu. The other consists of Junyi Hsieh and Irving Huang.

Separated from the core cluster of researchers are three smaller clusters: 1) Melissa Sloan; 2) Mark Wilding, Kyungjin Chae and Jiho Jang; and 3) Yoon Jik Cho and Hyun Jin Song. Each of these clusters reflects a publication produced by the author(s).

It is worth noting that early scholars who contributed to the literature on emotional labor in public administration are based in the United States (US). More recently, international researchers have penetrated this Americantric focus by working with American scholars. Collaboratively, they have examined emotional labor-related content in non-US contexts, such as China (Lu & Guy, 2014), South Korea (Guy & Lee, 2015; Wilding, Chae, & Jang, 2014; Yang & Guy, 2015), and Taiwan (Hsieh, Hsieh, & Huang, 2016). One study in particular, the work of Mastracci and Hsieh (2016), was conducted specifically utilizing a comparative lens. These authors compared job stress among nurses in individualist and collectivist cultures.

Co-Citation Network: References

The second and third networks show co-citation relationships. To understand the corpus of emotional labor scholarship in public administration, it is important to understand its origins as well as its evolution. By delving into what and whom researchers cite, the full scholarly progression is revealed.

To serve this purpose, we mapped co-citation networks of references and scholars (see Figures 4 and 5). We created these maps using VOSviewer. The maps considered the attributes of the bibliometric data.

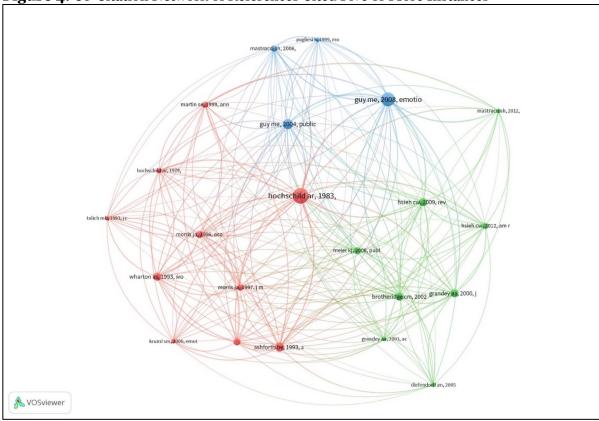


Figure 4. Co-Citation Network of References Cited Five or More Instances

A node in these networks depicts a reference or a scholar, and an edge between two nodes indicates a co-citation relationship (i.e., being cited together by one or more studies). The size of the node reflects how frequently the reference or the scholar was cited by the collected literature, while the location and the color of the node is based on relatedness (or similarity) with other nodes (Van Eck & Waltman, 2014). For instance, proximity to one another signifies a strong co-citation relationship, and identical coloring indicates the same property shared by two nodes. Due to the magnitude of co-cited references (n=457) and scholars (n=574), it would be indecipherable if all of the nodes were included in a single map. Therefore, only references and scholars cited five or more instances are presented.

Figure 4 displays the co-citation network of references. The references can be classified into three clusters. The first cluster (displayed in red) consists of generic emotional labor research developed in the last century. Unsurprisingly, one publication in particular, Hochschild (1983), has been referenced extensively. Since she developed the concept of emotional labor in her seminal book, *The managed heart: Commercialization of human feeling*, this is to be expected. Thus, this publication naturally lies at the center of the network. There are, in total, 17 citations of this book in public administration, making it the most cited reference on emotional labor.

In addition to Hochschild's book, other early work has exerted significant influence on emotional labor research in public administration by offering a broader understanding of its conceptualization and operationalization (e.g., Ashforth & Humphrey, 1993; Kruml & Geddes, 2000; Morris & Feldman, 1996; Rafaeli & Sutton, 1987). Some of these early studies, including Hochschild's, are qualitative in nature. Overall, the studies show an evolution in scholarly inquiry

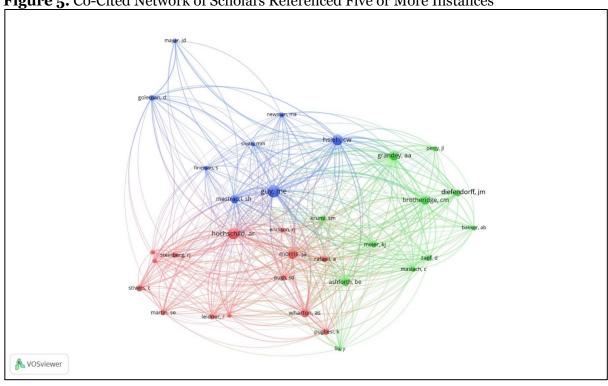


Figure 5. Co-Cited Network of Scholars Referenced Five or More Instances

from interviews and case studies to quantitative analyses of large sample surveys. While qualitative work can better provide in-depth insights into emotional labor, quantitative research has made it possible to explore the psychometric properties of emotional labor (e.g., constructs and measures) and their associated antecedents, correlates, and consequences in large samples.

The other two clusters in Figure 4 illustrate how emotional labor research has developed within public administration. The second cluster (displayed in blue) contains mostly early research by Guy and colleagues. Within the public administration literature, Guy and Newman (2004) were the first to publish on the concept; and, the work of Mastracci, Newman, and Guy (2006) underscored the centrality of emotional labor in job tasks. Yet, the most influential piece of their work is the 2008 book, *Emotional labor: Putting the service in public service*. This book presents a mixed-methods investigation into the emotive demands of public service jobs. Based on interviews with workers in a range of jobs, the authors developed and applied the Guy-Newman-Mastracci Emotional Labor Questionnaire, which they designed to measure elements of emotional labor and its sequelae (including pride in work, job satisfaction, and burnout). This book has been cited 15 times by other public administration studies.

The third cluster (displayed in green) reveals continuing scholarly development as cited references cover a broader scope of research. For example, Mastracci, Guy, and Newman (2012) focused on the work experiences of crisis responders. The work in these jobs is, by definition, emotionally intense. The book provides insights from interviews of responders as they explain what their day-to-day work experiences involve.

Also in the third cluster, Meier, Mastracci, and Wilson (2006) as well as Hsieh and Guy (2009) examined emotional labor's effect on public service performance. Moreover, many references in the third cluster such as Grandey (2000, 2003) and Diefendorff, Croyle, and Gosserand (2005)—

both of which focus on emotional labor in for-profit jobs—introduced conceptual frameworks grounded in Hochschild's work. These generic management studies have informed and enriched public sector research on emotional labor, whose focus is not on intra-office and sales relationships but rather on citizen—state relationships.

Co-Citation Network: Scholars

While Figure 4 shows the network of citations, Figure 5 reveals another variant on the research. It shows the extent to which individual scholars have had an impact on emotional labor research in public administration. There are 33 authors broadly clustered into three groups based on the likelihood that they are co-cited by the same study. With no attribution of causation, the presentation here focuses on the simple frequency of reference.

Similar to Figure 4, Arlie Hochschild who is the foremother of generic emotional labor research, is near the center of this bibliometric map. She is undeniably one of the most influential scholars as she has accumulated 26 citations. Yet, as the figure shows, Mary Guy who pioneered the subject within public administration, extended the discussion of emotional labor to public service jobs and is the most referenced scholar in this field (with 32 citations). Among the top 10 most-cited authors, there are three public administration scholars: Chih-Wei Hsieh (with 25 citations), Sharon Mastracci (with 15 citations), and Mary Guy. This analysis reveals the interdisciplinary nature of public administration research and its compartmentalization. The field relies heavily on the "import" of generic literature (primarily from sociology and business) to inform its theory building and research.

Keyword Co-Occurrence Network

Keywords are supplied by authors and indicate the topics covered in publications. They usually appear in the abstract of a publication. To understand the subjects and themes covered by the collected bibliometric data, we analyzed the co-occurrence of author keywords. Keywords of each publication were obtained from the Web of Science or Google Scholar databases used in this analysis. Keywords were not available for the two books and the one book chapter.

The results of our network mapping are presented in Figure 6, where a node represents a keyword. The size of the node indicates how frequently the keyword appears in the data. The coloring of the node is based on the average year of publication of the keyword. An edge between two nodes indicates a co-occurrence relationship, which ultimately indicates that the connected keywords appeared together in one or more studies.

The data set consists of 34 keywords, of which the following terms occur most frequently: "emotional labor" and its synonym "emotion work" (12 occurrences), "job satisfaction" (six occurrences), "burnout" (four occurrences), "emotive expression" (three occurrences), and "public performance" (three occurrences). There are also terms such as "display rules," "deep acting," and "surface acting" that are subdimensions of the emotional labor construct, suggesting that public administration researchers have also studied the distinctive effects of various emotional labor demands and strategies.

To display the evolution of research content, we mapped the co-occurrence network of keywords using the overlay visualization function of VOSviewer (see Figure 6). Temporal variation in research topics and themes can be detected by checking the average publication year of each keyword (Goyal, 2017). As the figure shows, "gender differences" and "emotional labor" are

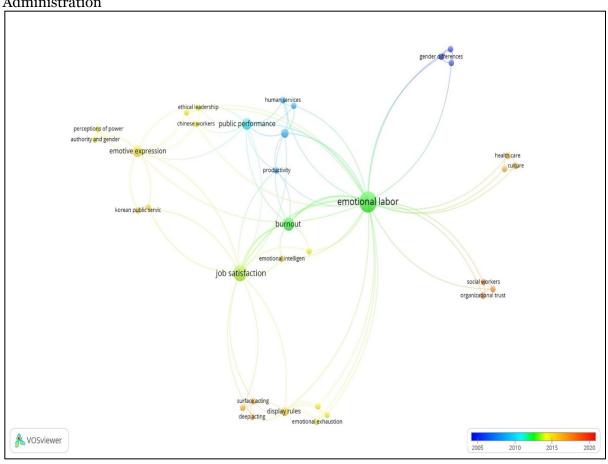


Figure 6. Keyword Co-Occurrence Network of Emotional Labor Studies in Public Administration

connected, which reflects the fact that gender equality is the major impetus for the naissance of emotional labor research in public administration. That is, when Guy and Newman (2004) introduced the concept to the field, they did so against the backdrop of gender segregation in the workplace. They argued that emotional labor, especially in terms of nurturance, is characterized as "women's work" and is undervalued in the labor marketplace. This has led to an increase in the number of scholars who have focused their work on the gender effects of emotional labor (e.g., Guy, 2017; Mastracci, Newman, & Guy, 2006; Meier et al., 2006; Tomsich & Guy, 2014; Yang & Guy, 2015).

Public service performance is another popular theme among studies. Guy, Newman, and Mastracci (2008) contend that emotional labor helps public service workers produce a better dyadic interaction with citizens. However, except for the studies of Meier, Mastracci, and Wilson (2006) and Hsieh and Guy (2009), most publications do not include a performance measure as the variable to be explained or examined. Instead, these studies focus on issues surrounding behavioral and physiological consequences of emotional labor. Studies that use keywords such as "job satisfaction," "job engagement," "burnout," "emotional exhaustion," "job stress," and "turnover intention" are emblematic of this line of inquiry. In the collected publications, 12 of these studies contained at least one of these keywords. Given that the consequences of performing emotion work can be troublesome, some of these studies even explore ways to mitigate burnout, such as "emotional intelligence," "emotive skills," "job resources," and "self-efficacy."

Discussion

The networks and maps in this study provide insights into pathways of theory development and measurement for emotional labor in public service. These networks and maps also demonstrate how research diffuses across the spectrum of social sciences and into public administration from other fields as well as out of the former and into the latter. This diffusion is unidirectional if the diffusion occurs only from one field to another and bidirectional when it occurs in both directions.

From the networks and maps presented in this study it is obvious that scholars have gradually formed an intellectual community around the subject of emotional labor in public service. It is also obvious that the business-focused literature serves as a backdrop and informs this work. However, the extent to which public administration scholars' research has contributed in the opposite direction remains unclear. To measure the contributions of the 22 collected publications in this study, we relied on the Web of Science database to obtain citation from SSCI journals public administration information (both and administration). We then tallied the frequency with which the 22 emotional labor publications in public administration had been cited by articles in other fields and by public administration articles published by SSCI journals. Tables 2 and 3 present these findings.

Altogether, the 22 public administration emotional labor publications have been cited 68 times in nonpublic administration publications focusing on emotional labor. These nonpublic administration publications are from several disciplines, including general management (30 citations), psychology (17 citations), occupational health (14 citations), and gender studies (seven citations).

In contrast, public administration has made greater "use" of the 22 emotional labor publications. There are 186 citations by 87 articles published by SSCI public administration journals, such as *Public Administration Review* (13 articles), *Review of Public Personnel Administration* (11 articles), *Public Personnel Management* (10 articles), *Journal of Public Administration Research and Theory* (eight articles), and *American Review of Public Administration* (eight articles). Most of the articles share a common focus on either employee wellbeing or gender equity. The 187 citations by public administration articles is nearly three times as many as the frequency of citations in the generic emotional labor literature. Thus, the generic research informs its counterpart in public administration but not necessarily the other way around. This highlights the balkanization of the academy, where each discipline focuses more inwardly than outwardly (except in the case of inherently interdisciplinary fields such as public administration).

Tables 2 and 3 also show that the pioneering work of Guy and Newman (2004) is the most referenced publication, which has been cited 15 times in nonpublic administration emotional labor publications and 49 times in public administration emotional labor publications. This is followed by the seminal book of Guy, Newman, and Mastracci (2008), which has been cited 14 times in nonpublic administration publications and 26 times in public administration publications. In Table 2, there is a gap between the two abovementioned publications and the rest of the collected bibliometric data. As the third publication on this list, the article by Meier, Mastracci, and Wilson (2006) has been referenced six times; and, although it has not significantly contributed to the generic emotional labor literature, this publication has influenced public administration scholarship (22 citations).

Table 2. Emotional Labor Studies in Public Administration Cited in Nonpublic Administration Articles

Articles			
# of Cites	Author(s)	Title	Source
15	Guy, & Newman	Women's jobs, men's jobs: Sex segregation and emotional labor	Public Administration Review, 2004, 64(3), 289- 298
14	Guy, Newman, & Mastracci	Emotional labor: Putting the <u>service</u> in public service	M. E. Sharpe Inc., 2008
6	Meier, Mastracci, & Wilson	Gender and emotional labor in public organizations: An empirical examination of the link to performance	Public Administration Review, 2006, 66(6), 899- 909
5	Hsieh, Yang, & Fu	Motivational bases and emotional labor: Assessing the impact of public service motivation	Public Administration Review, 2012, 72(2), 241- 251
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1	Yang, & Guy	Gender effects on emotional labor in Seoul metropolitan area	Public Personnel Management, 2015, 44(1), 3-24
1	Hsieh	Burnout among public service workers: The role of emotional labor requirements and job resources	Review of Public Personnel Administration, 2014, 34(4), 379-402
1	Hsieh, Jin, & Guy	Consequences of work-related emotions: Analysis of a cross-section of public service workers	American Review of Public Administration, 2012, 42(1), 39-53

Table 3. Emotional Labor Studies in Public Administration Cited in Public Administration Articles

<u>Articles</u>			
# of Cites	Author(s)	Title	Source
49	Guy, & Newman	Women's jobs, men's jobs: Sex segregation and emotional labor	Public Administration Review, 2004, 64(3), 289-298
26	Guy, Newman, & Mastracci	Emotional labor: Putting the service in public service	M. E. Sharpe Inc., 2008
22	Meier, Mastracci, & Wilson	Gender and emotional labor in public organizations: An empirical examination of the link to performance	Public Administration Review, 2006, 66(6), 899-909
14	Newman, Guy, & Mastracci	Beyond cognition: Affective leadership and emotional labor	Public Administration Review, 2009, 69(1), 6- 20
11	Mastracci, Newman, & Guy	Appraising emotion work: Determining whether emotional labor is valued in government jobs	American Review of Public Administration, 2006, 36(2), 123-138
11	Hsieh, & Guy	Performance outcomes: The relationship between managing the "heart" and managing client satisfaction	Review of Public Personnel Administration, 2009, 29(1), 41-57
10	Hsieh, Yang, & Fu	Motivational bases and emotional labor: Assessing the impact of public service motivation	Public Administration Review, 2012, 72(2), 241-251
10	Mastracci, Guy, & Newman	Emotional labor and crisis response: working on the razor's edge	M. E. Sharpe Inc., 2012
9	Hsieh, Jin, & Guy	Consequences of work-related emotions: Analysis of a cross-section of public service workers	American Review of Public Administration, 2012, 42(1), 39-53
7	Jin, & Guy	How emotional labor influences worker pride, job satisfaction, and burnout: An examination of consumer complaint workers	Public Performance & Management Review, 2009, 33(1), 88-105
6	Hsieh	Burnout among public service workers: The role of emotional labor requirements and job resources	Review of Public Personnel Administration, 2014, 34(4), 379-402
3	Lu, & Guy	How emotional labor and ethical leadership affect job engagement for Chinese public servants	Public Personnel Management, 2014, 43(1), 3-24
2	Guy, & Lee	How emotional intelligence mediates emotional labor in public service jobs	Review of Public Personnel Administration, 2015, 35(3), 261-277
2	Sloan	The consequences of emotional labor for public sector workers and the mitigating role of self-efficacy	American Review of Public Administration, 2014, 44(3), 274-290

2	Wilding, Chae, & Jang	Emotional labor in Korean local government: Testing the consequences of situational factors and emotional	Public Performance & Management Review, 2014, 38(2), 316-336
1	Yang, & Guy	dissonance Gender effects on emotional labor in Seoul metropolitan area	Public Personnel Management, 2015,
1	Tomsich, & Guy	Perceptions of authority: How gender affects citizen ratings of judges	44(1), 3-24 Administration & Society, 2014, 46(5), 471-495

Recency also factors into citations. Indeed, for studies published after 2010, only Hsieh, Yang, and Fu (2012) and Mastracci, Guy, and Newman (2012) have five citations or more in Table 2 and 10 citations in Table 3. Thus, one conclusion may be that in a new area of research that goes against the grain of the canon (e.g., research where emotion is seen not as a troublesome byproduct but an inherent aspect of human behavior) it can take longer for a subject to resonate with scholars and be considered worthy of investigation. Indeed, the popularity of "behavioral" public management is rising despite the fact that its advocates continue to avoid the reality of emotion. Instead, the research focuses on cognition and attempts to acknowledge the cognitive sequelae to emotion rather than the *experience* of emotion (e.g., see Tummers et al., 2015). As long as the field turns a blind eye to the reality of emotion, however, public administration scholars will never fully comprehend all of the dimensions that produce behavior.

Conclusion and Looking Forward

Several caveats are in order when interpreting the networks displayed in this article. First, the points on the maps are moving targets. In fact, as we were writing this article, there was more work on emotional labor being published. Thus, it is best to view these maps as pictures of the field at one point in time with an understanding that progression will continue, and new work will be continually added. Second, as convenient as online database searches are they inevitably miss some publications. Although we sought to find all of the relevant literature, we may have missed some. Still, this study demonstrates the utility of bibliometric analysis in assessing the state of a subfield. It also demonstrates the extensiveness and intensiveness of networks of scholars who probe similar subjects, where the most growth is, the rapidity or slowness of the subfield, and the existing gaps in knowledge.

Working backward from the mappings, there is room for growth in comparative and international research on emotional labor in public administration. The Anglo-centric approach to public administration theory is only reflective of Western thought, culture, and norms. It has little cognizance of other approaches. The citizen–state relationship will be better understood when more research is available to illuminate it around the globe.

Based on the identification of keywords, the research in this study focused on the sequelae to emotional labor in terms of job satisfaction, burnout, performance effects, and emotional intelligence correlates, as we know little about how emotional labor influences the citizen—state relationship. For example, how does emotion work performed by public servants influence citizen engagement, participation, and commitment? Is citizen participation affected by the quality of transactions between government officials and citizens? To what degree do feelings of trust increase citizens' interest in engagement with the state? How does the role of contractors as

intermediaries between government and citizens affect engagement? How does it influence the affective relationship between citizen and state? How does it affect the performance of emotional labor? These are questions that have yet to be investigated, but the answers could have a substantive impact on practice.

Extending the focus beyond the subfield of emotional labor, this study demonstrates how to map the diffusion of knowledge using software for bibliometric analysis. The display technology offers a microscope-like tool that allows us to examine the structure of literature in full detail. The networks of co-authors and of co-citations reveal the "research tribes," which provide us with information about boundaries and edges. While the former blinds scholars to related research, the latter opens their eyes to it. In other words, boundaries are hard lines that circumscribe what is read and incorporated into theory. Edges are penetrable areas of knowledge that are ripe for more investigation. They, therefore, invite theory building. To the degree that public administration scholarship lends itself more to edges than boundaries, the networks within which scholars circulate will be broad.

Keyword co-occurrence networks reveal topics of existing studies. They also make obvious topics that have yet to be addressed. By undertaking a detailed examination of keyword co-occurrences, scholars are better informed of the current state of knowledge as well as potential directions for future research in their field. Thus, we hope that this study will spur additional analyses of important topics within public administration. As a caveat, however, it is important to note that selection of keywords carries with it an inherent bias that should be acknowledged. That is, keywords selected by authors of original works as well as keywords selected by authors of this research are subjective. This may skew results.

Ultimately, bibliometrics is another tool that public administration scholars can use to study the literature in the field, learn how its knowledge diffuses, where its edges are, and what research gaps need to be filled. With the proliferation of searchable databases, these should yield valuable information for doctoral students as they search for dissertation topics. These databases should also yield valuable information for established scholars as they track existing networks and build theory.

Disclosure Statement

The authors declare that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

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Author Biographies

Chih-Wei Hsieh is an Assistant Professor in the Department of Public Policy at City University of Hong Kong. His research focuses on the management of human resources in public service as well as related equality and morality challenges. He has published articles on emotional labor, public service motivation, workplace diversity, and employee well-being.

Mary E. Guy is a Professor in the School of Public Affairs at the University of Colorado Denver. Her research focuses on the human processes involved in public service delivery with a special emphasis on emotional labor. Recent books include *The Palgrave handbook of global perspectives on emotional labor in public service* (with Sharon H. Mastracci and Seung-Bum Yang) and *Essentials of public service: An introduction to public administration* (with Todd Ely). She is past president of the American Society for Public Administration (ASPA) and a fellow of the National Academy of Public Administration (NAPA).

Daan Wang is a Ph.D. candidate in the Department of Public Policy at City University of Hong Kong. He has multiple years of work experience as a policy researcher in Chinese local government. His research interests focus on public sector human resource management, public management innovation, and collaborative governance. He is currently working on a research project focusing on civil service selection in China.

Appendix

Table A1. List of Public Administration Journals in 2016 SSCI

Journal	Journal Danking
	Journal Ranking
Journal of Public Administration Research and Theory	1
Public Administration Review	2
Journal of Policy Analysis and Management	3
Journal of European Public Policy	4
Public Administration	5
Regulation & Governance	6
Climate Policy	7
Governance	8
Public Management Review	9
Policy Studies Journal	10
Policy & Politics	11
Journal of Public Policy	12
Environment and Planning C-Government and Policy	13
Policy Sciences	14
International Public Management Journal	15
Journal of European Social Policy	16
Review of Policy Research	17
Science and Public Policy	18
Public Policy and Administration	19
Review of Public Personnel Administration	20
Journal of Social Policy	21
American Review of Public Administration	22
International Review of Administrative Sciences	23
Journal of Accounting and Public Policy	24
Social Policy & Administration	25
Nonprofit Management & Leadership	26
Public Money & Management	27
Policy and Society	28
Administration & Society	29
Australian Journal of Public Administration	30
Journal of Comparative Policy Analysis	31
Public Personnel Management	32
Local Government Studies	33
Contemporary Economic Policy	34
Public Administration and Development	35
Public Performance & Management Review	36
Lex Localis-Journal of Local Self-Government	37
Canadian Public Policy-Analyse de politiques	38
Policy Studies	39
Human Service Organizations Management Leadership & Governanc	
Journal of Homeland Security and Emergency Management	41
Transylvanian Review of Administrative Sciences	42
Canadian Public Administration	43
Gestion y Politica Publica	44
Revista del CLAD Reforma y Democracia	45
Civil Szemle	46
Amme Idaresi Dergisi	47