



Management pioneer contributors: 30-year review

Management
pioneer
contributors

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Abstract

Purpose – The purpose of this paper is twofold: to report the number of articles in the business academic literature that have been written about the pioneers depicted in a 1977 Daniel Wren and Robert Hay study; and to report the findings from a replication and extension of that study.

Design/methodology/approach – The paper employed a systematic literature review combined with an empirical replication and extension of the 1977 study.

Findings – The literature review revealed that 101 articles referenced only a few of the 1977 identified pioneers. In fact 47 of the articles were about three of the pioneers – keeping them firmly in the academic institutional memory, while others have fallen into insignificance. The results of the new study identified seven new names for the list of top ten, while three remained steadfast. Frederick Taylor was number one on both lists. Interestingly, no woman made the top ten.

Research limitations/implications – The replication and extension is a strength and limitation in which the authors were able to meticulously follow Wren and Hays' methodology, yet prevented the inclusion of possible viable new sources.

Practical implications – This piece calls for the continuation to rediscover history as a backdrop for research.

Originality/value – The paper reminds us of the value of preserving business academic institutional memory.

Keywords Management history, Management research, Business history

Paper type Research paper

The American bicentennial celebrations were a time of reflection and promise – a reflection on the events and people who had left their imprint on the heart of the development of the American landscape and a promise of the things to come in the next 200 years that would creatively and innovatively alter the course of history. In the spirit of that reflection, the Management History Division at the 1974 Academy of Management (AOM) annual meeting asked Daniel Wren and Robert Hay to compile a list of “outstanding individuals who had contributed the most to American business and management thought and practice in the past 200 years” (Wren and Hay, 1977, pp. 470-1).

To answer that call, Wren and Hay (1977) undertook a three part extensive empirical study. First, the authors requested nominations from the officers of the AOM's History Division and other select scholars to create an “opinion survey” of the management



pioneers that should be honored with US Postal stamps in recognition of the American Bicentennial. This survey generated 71 names that were then sent the membership of the AOM, Academy of Management History Division and the Business History Conference. The scholars and business professionals belonging to these groups were asked to identify the top ten contributors and rank them 1-10 according to contribution. Table I is a reproduction of Wren and Hay's final composite after reconciling all three lists, which as the title of their original article implied, there was some differences even then as to who were perceived as the top pioneering contributors.

This paper offers a look back to the past with an eye to the future. Thus, the first of two objectives is to present a report on an extensive review of the management and business history literature over the past three decades (1976-2006) to determine how many articles have been written that reference the pioneers noted by Wren and Hay (1977). Second, we will report the findings from a replication and extension of the Wren and Hay study.

The first study: a structured academic literature review

About 30 years, the academy felt the recognition of the top contributing pioneers was an important undertaking (Wren and Hay, 1977). Recently, we have an obligation to keep the history of great business and management thoughts and people alive in our institutional memory. Coffey and Hoffman (2003) extend this notion by arguing that the loss of such monumental historical events would frustrate our ability to solve problems encountered in the future. As Wren (1994) notes, it falls to us to learn from the past as we prepare for the future.

One way to assess the impact those pioneers have had is to look to the written word – the academic literature. A two-part comprehensive literature review was completed

Rank	Contributor	Number of votes	Points	Total points	First place votes
1	Taylor, Frederick	108	850	958	51
2	Barnard, Chester I.	81	516	597	9
3	Gilbreth, Frank	70	414	484	0
4	Mayo, Elton	61	368	429	3
5	Gilbreth, Lillian	61	348	409	2
6	Sloan, Alfred P., Jr	55	313	368	3
7	Follett, Mary parker	55	302	357	2
8	Ford, Henry L.	48	262	310	4
9	Maslow, Abraham	45	209	254	3
10	Gantt, Henry L.	40	211	251	2
11	Roethlisberger, Fritz	41	203	244	2
12	Wharton, Joseph	40	196	236	0
13	Lewin, Kurt	33	172	205	2
14	Edison, Thomas A.	27	171	198	6
15	Du Pont, Pierre	28	148	176	0
16	Carnegie, Andrew	32	143	175	2
17	Whitney, Eli	21	123	144	3
18	Rockefeller, John D.	23	114	137	1
19	Slater, Samuel	19	116	135	3
20	Watson, Thomas	18	102	120	2

Table I.
Reproduction of Wren
and Hay (1977) composite
of surveys

to analyze how many times those pioneers identified in 1977 have been referenced in the literature over the last 30 years. Part I of these involved a broad review of three databases, while Part II identified 11 specific business academic journals for the completion of the study.

First study – part I process

Table II outlines the first review of the literature database and illustrates the number of hits generated for each name on the original list using EBSCO Host and three specific databases (Business Source Premier, Academic Search Premier, and PsycInfo) that are common to business literature research. The process was systematically repeated four times for each of the 20 pioneers listed on the 1977 list. After choosing the three databases as predetermined for the study and setting the base criterion of studies published during 1976-2006, the name of the pioneer was entered with quotations to minimize confusion or cross reference with other potential names. Finally, the search was directed to only retrieve results that appeared in the title or abstract of the article. Next, four different searches were completed. The first used the contributors name only, the second search included the contributor’s name and the word “business,” the third included the pioneer’s name and the word “management,” and the fourth included the pioneer’s name as well as the words “business” and “management.” The results are shown in Table II.

Rank	1977 list of pioneers	A	B	C	D	E
1	Taylor, Frederick W.	106	15	49	10	4
2	Barnard, Chester I.	38	12	33	8	13
3	Gilbreth, Frank	17	1	15	1	2
4	Mayo, Elton	45	15	39	6	2
5	Gilbreth, Lillian	43	3	30	3	3
6	Sloan, Alfred P., Jr	17	6	5	2	1
7	Follett, Mary Parker	67	21	57	14	16
8	Ford, Henry	2,478	294	261	59	19
9	Maslow, Abraham	269	16	42	5	2
10	Gantt, Henry L.	5	1	3	1	1
11	Roethlisberger, Fritz	3	5	4	3	1
12	Wharton, Joseph	18	2	5	2	0
13	Lewin, Kurt	300	23	49	13	5
14	Edison, Thomas A.	255	15	3	0	5
15	Du Pont, Pierre	4	0	0	0	0
16	Carnegie, Andrew	309	43	14	5	4
17	Whitney, Eli	27	3	1	0	0
18	Rockefeller, John D.	551	97	19	7	6
19	Slater, Samuel	20	4	3	2	2
20	Watson, Thomas	128	73	8	7	4

Notes: List of 20 pioneers by rank – (Wren and Hay, 1977, p. 476); EBSCO Host: Business Source Premier, Academic Search Premier, Psyc Info; A, Search Criteria: Contributor’s Name Only; B, Search Criteria: Contributor’s Name + the word “Business”; C, Search Criteria: Contributor’s Name + the word “Management”; D, Search Criteria: Contributor’s Name + the word “Business” + the word “Management”; E, The number from the specified list of Journals take from Table I; Number of hits referencing 1977 list of pioneers

Table II.
EBSCO database search
(1976-2006)

First study – part I results

When using the name only – Henry Ford generated the most hits with 2,478. The next closest were John D. Rockefeller with 551 and Kurt Lewin with 300. The three at the bottom of the list in terms of hits generated were Henry L. Gantt, Fritz Roethlisberger, and Pierre Du Pont with five hits each. Entering the contributor's name and the word "business", Henry Ford again took the lead spot with 294 hits. Rockefeller was second with 97 hits. Pierre Du Pont generated 0 hits. Frank Gilbreth and Henry Gantt received one hit each. Switching to the term "management," Ford again led the way with the most hits ($n = 261$). He was followed by Mary Parker Follett, who came in at a distant second with 57 hits. Du Pont and Whitney were the bottom two hit producers with 0 and one, respectively. Finally, a combination of the pioneer's name with the terms "business" and "management" indicated that Henry Ford generated the most with 59 hits. Whitney, Du Pont, and Edison generated 0 hits.

First study – part II process

Using the same database selections (Business Source Premier, Academic Search Premier, and PsycInfo) as chosen for Part I, 11 business academic journals were selected for this phase of the study. Since the initial study was solicited by the Academy, it was determined the four journals published by the Academy would be an appropriate start to the review: *Academy of Management Journal*, *Academy of Management Learning and Education*, *Academy of Management Perspective* – formerly *Academy of Management Executive*, and the *Academy of Management Review*. The second set of three journals were highlighted in a 2005 article by van Fleet and Wren (2005) as they discussed including history as a subject in business school curriculums: *Business History Review (BHR)*, *Journal of Economic History*, and the *Management Decision (MD)* (which housed the *Journal of Management History* for a period of time). The final four journals were considered important enough in business and management history to be included in the study: *Journal of Management (JOM)*, *Leadership Quarterly*, *Harvard Business Review (HBR)*, and *Journal of Management Studies*.

A very careful assessment was made to ensure consistency across the 11 journals. First the three databases and the basic criterion of time frame (1976-2006) were entered. Next the pioneer's name was entered and the first journal was chosen, followed by the second, third and so forth. This process was repeated for each pioneer and for each journal until all had been entered and the counts had been collected. Table III illustrates the counts for each pioneer across the list of chosen journals.

First study – part II results

A total of 101 articles were identified that included 17 of the original 20 pioneers noted in Wren and Hay (1977). The most articles discussing our pioneers were found in the *HBR* which printed 27 articles over the 30-year period. It must be noted that 10 of that 27 was on Henry Ford. In fact, more articles were written about Ford and his contributions (19 articles out of the 101) than any other pioneer. The journal with the second highest number of pieces about the pioneers was the *BHR* with 17. The *AMR* published 15 articles and the *Journal of Management* released 14. The only other journal to have a number of articles in the double digits was *MD* at 12. The remaining journals had six or fewer articles featuring the pioneers.

Rank	1977 list of pioneers	1	2	3	4	5	6	7	8	9	10	11	T
1	Taylor, Frederick W.	0	0	0	2	1	0	1	0	0	0	0	4
2	Barnard, Chester I.	0	0	0	3	2	6	0	2	0	0	0	13
3	Gilbreth, Frank	0	0	0	0	2	0	0	0	0	0	0	2
4	Mayo, Elton	0	0	0	1	0	1	0	0	0	0	0	2
5	Gilbreth, Lillian	0	0	0	1	2	0	0	0	0	0	0	3
6	Sloan, Alfred P., Jr	0	0	0	0	0	0	0	0	1	0	0	1
7	Follett, Mary Parker	0	0	1	4	4	3	1	1	1	0	1	16
8	Ford, Henry	0	0	2	0	0	0	0	10	6	0	1	19
9	Maslow, Abraham	0	0	0	0	0	1	0	1	0	0	0	2
10	Gantt, Henry L.	0	0	0	0	1	0	0	0	0	0	0	1
11	Roethlisberger, Fritz	0	0	0	0	0	0	0	1	0	0	0	1
12	Wharton, Joseph	0	0	0	0	0	0	0	0	0	0	0	0
13	Lewin, Kurt	0	1	1	1	1	0	0	0	0	1	0	5
14	Edison, Thomas A.	0	0	0	0	0	0	0	1	3	0	1	5
15	Du Pont, Pierre	0	0	0	0	0	0	0	0	0	0	0	0
16	Carnegie, Andrew	0	0	0	0	0	0	0	3	1	0	0	4
17	Whitney, Eli	0	0	0	0	0	0	0	0	0	0	0	0
18	Rockefeller, John D.	0	0	0	0	0	0	0	3	3	0	0	6
19	Slater, Samuel	0	0	0	0	0	0	0	1	1	0	0	2
20	Watson, Thomas	0	0	0	0	0	0	0	3	1	0	0	4
	Totals	0	1	4	14	14	12	6	27	17	3	3	101

Notes: List of pioneers by rank – composite survey (Wren and Hay, 1977, p. 476); EBSCO Host: Business Source Premier, Academic Search Premier, Psyc Info; *AMJ*, *Academy of Management Journal*; *AMLE*, *Academy of Management Learning and Education*; *AME/P*, *Academy of Management Executive/Perspective*; *AMR*, *Academy of Management Review*; *JOM*, *Journal of Management*; *JMH/MD*, *Journal of Management History/Management Decision*; *LQ*, *Leadership Quarterly*; *HBR*, *Harvard Business Review*; *BHR*, *Business History Review*; *JMS*, *Journal of Management Studies*; *JEH*, *Journal of Economic History*; Number of articles referencing the 1977 list of pioneers

Table III.
Literature review of 11
academic Journals
(1976-2006)

As noted previously, Henry Ford and his contribution to American business received the most attention with 19 out of 101 articles. Two others from the list worth noting are Mary Parker Follett (15) and Chester I. Barnard (13). Three pioneers from the list were not referenced in any article: Joseph Wharton (0), Pierre Du Pont (0), and Eli Whitney (0). The remaining 14 were featured in 6 or fewer articles. It is interesting that only four articles have been written about Frederic Taylor, the man considered highly enough to be ranked number one.

The results of the literature review seems to echo the conclusion that Wren and Hay made 30 years ago, there is a difference of opinion among scholars as to who has made the biggest contribution to American business and management thought. The important question here is whether scholars are continuing to acknowledge the importance of those 20 individuals. Or is it the case that their views have changed and, as a result, the list needs to be updated?

The second study: a replication and extension

Second study – process

With Daniel Wren's consent and in memory of Robert Hay, we executed a replication and extension of their study completed over 30 years ago during the bicentennial year.

Great detail was taken to replicate the original study in methodology (survey and point system), but we did broaden the scope of who could be included. In the original study, Wren and Hay (1977) focused only on those scholars born in America as directed by the US Postal Service, because stamps were planned to be the final form of recognition. In an effort to get a more comprehensive picture, we expanded the search to include names of management pioneers from across the globe. Thus, three criteria were set for the nominees to be included in the study:

- (1) any nationality;
- (2) deceased; and
- (3) have substantially contributed to business and management thought, practice, and philosophy.

The original authors gathered nominations for the list of contributors from a set of history experts including the officers of the History Division. Second, they asked members from three academic groups (Business History Conference, AOM, and the Management History Division) to review the list and choose and rank their top ten contributors. Applying a four step point system (outlined below) a list was compiled based on the top 20 men and women with the highest total number of points.

For this portion of our study, we also used members from the same three organizations. These members were sent two online surveys. The first survey included the list of the 20 generated in 1977. Respondents were given a brief history of the original study and asked to review the list of 20 and make any suggestions for additions. In total 36 new names were offered for in total 56 names. A second online survey was sent to the same audience. This time, respondents were asked to rank order their top ten choices from one (the most important person) to ten (the least important). In analyzing the list, Wren and Hay's (1977, p. 471) exact point system and methodology of were employed. The steps completed were as follows:

- Ten points were given for each first place mention, nine points for second place mention, and so forth.
- An additional point was awarded for each mention received. Therefore, the range of points possible for any given mentions was from 2 to 11.
- The individuals were then ranked according to the highest total number of points.
- When two individuals obtained the same number of points, the one having the larger number of mentions was awarded the higher rank.

The results of this portion of the study left us with 48 names on the list with total points ranging from 178 to 1. All though it could be argued that all 48 men and women have made a significant contribution to the development of management thought and business practice, the purpose of this study was to identify the top ten. Therefore, we limit our discussion to those ten (Table IV).

Second study – results

Frederick Taylor garnered the most points at 178. He was followed closely by Max Weber (145), Chester Barnard (138), and Peter Drucker (139). The next group fell 30 or more points behind, but still had significant representation: Henri Fayol (105), Adam Smith (101), Herbert Simon (98), and Alfred Chandler (101). Ford, Schumpeter, and

Rank	Management pioneers	Number of votes	Points	Total points	First place votes
1	Taylor, Frederick W. ^a (1)	23	155	178	4
2	Weber, Max	18	127	145	1
3	Barnard, Chester I. ^a (2)	17	121	138	5
4	Drucker, Peter	19	120	139	5
5	Fayol, Henri	12	93	105	4
6	Smith, Adam	13	88	101	3
7	Simon, Herbert	12	86	98	1
8	Chandler, Alfred	17	84	101	2
9	Schumpeter, Joseph	10	59	69	1
10	Ford, Henry ^a (8)	12	57	69	0
11	Sloan, Alfred P., Jr. ^a (6)	11	58	69	0
12	Mayo, Elton ^a (4)	6	42	48	1
13	Follett, Mary Parker ^a (7)	8	34	42	0
14	Deming, Edwards	8	33	41	0
15	Lewin, Kurt ^a (13)	8	29	37	0
16	Penrose, Edith	5	28	33	0
17	Babbage, Charles	5	27	32	0
18	Machiavelli, Niccolo	6	26	32	1
19	McGregor, Douglas	6	24	30	0
20	Koontz, Harold	4	24	28	0

Table IV.
Composite list of pioneer
contributors – 2008
survey

Note: ^a(no.) Ranking on original 1977 composite list of top 20 (Wren and Hay, 1977)

Sloan all had 69 total points when considering places 9 and 10. Following the tie-breaking methodology used by Wren and Hay (1977), Joseph Schumpeter took ninth because he had a first place vote. Henry Ford captured the tenth place, because he had one more original vote than Sloan.

Comparison of the two top ten list

Comparing our top ten to the 1977 top ten, there are some overlaps and some additions. Frederick Taylor reigned supreme on both lists. Chester Barnard fell back one place to third. Max Weber, excluded in the Wren and Hay study because of the restrictions of the US Postal Service, took second place. It was not a surprise that Peter Drucker made the 2008 list and took the number 4 place. His recent death left his contributions at the forefront of our thinking. Elton Mayo was ranked number four in 1977, but came in as 12 on the current survey. Henri Fayol, previously excluded like Max Weber, came in fifth. Adam Smith (6), Herbert Simon (7), Alfred Chandler (8), and Joseph Schumpeter (9) were not on the 1977 list. Henry Ford was number 8 on the 1977 list, but rounded out the 2008 list in the number 10 place.

Although Mary Parker Follett was listed as number 7 in 1977, she fell out of the top ten in our survey. Interestingly, no woman made our list of top ten. Neither Frank nor Lillian Gilbreth made the 2008 list, even though they were ranked third and fifth, respectively, in 1977. Alfred Sloan was number 6 on the previous list, but by a thin margin did not make our top ten. He came in at number 11. Abraham Maslow and Henry Gantt were nine and ten, respectively, in 1977, but did not make the 2008 list. Given the changes in the top ten from Wren and Hay in 1977 to the current list, it seems appropriate that we sought for a broader perspective.

Strengths, weaknesses, and future research

As with all research, this study has its strengths and weaknesses. A notable strength lies in our close replication of Wren and Hay's (1977) original work. Their methods were meticulously followed, where appropriate, in an effort to produce an unbiased representation of the current state of mind regarding management's historical figures. We did, however, make a significant change in that we allowed for the inclusion of non-American-born thinkers. Through this process, we were able to identify two new members to the list of most important management thinkers – Weber and Fayol. Given the increased interdependence of our world, we believe this to be an important contribution.

Just as our following Wren and Hay's (1977) methods contributed to the strength of this study, it also served as a weakness. In following their process, we necessarily limited our sample by soliciting participation from those individuals belonging to only three groups (i.e. AOM, Business History Conference, and the Management History Division). While these three groups represent an international and diverse membership, there are likely other organizations, such as the European Association for People Management, whose inclusion might have impacted our results. Along these lines, there could be other international journals, besides the primarily American-based ones we chose, that could provide important information regarding our research questions. Future research could benefit from taking a more expansive approach in sampling, both in relation to professional organizations and scholarly journals.

It may also be worthwhile to attempt identification of those characteristics that make one perceived to be a valuable contributor. To that point, Frederick Taylor was noted as the most important management pioneer in both studies and Barnard was in the top-ten in both lists. Yet, Henry Ford who held the number 8 spot in 1977 and fell to number 10 in the present study had more articles written about him during the course of the 30 years under review. The question remains – Why? Is it a function of their written work? Is it a process they championed? Did they leave seminal works or have seminal pieces been written about them? Have appearances in popular press articles left their brand on management practice? Scholars may find it beneficial to better understand the factors driving perceived importance. Parker and Ritson (2005) argued that stereotyping contributes to the “guru-phenomenon”. McCormick and Folsom (2003) proposed that there are many measures for greatness as they looked at America's greatest entrepreneurs, such as wealth accumulation or philanthropic work. Continued study might reveal certain traits or characteristics common among those identified in our study that have sustained the passage of time and remained at the top of the list as those having significantly impacted management and business practice and thought.

Another trend we noticed is the decline of female contributors in our study as compared to the original. Wren and Hay (1977) reported that two women, Lillian Gilbreth and Mary Parker Follett, appeared in their list of top ten. However, 30 years later Lillian Gilbreth dropped off the list entirely and Mary Parker Follett dropped from seventh to 13th place. Indeed, Mary Parker Follett was the only woman in the top 20 listing. Considering today's workforce is comprised of a larger percentage of women, in general, and the academy, in particular, we find this curious. We would have expected the number of women to increase rather than decline. Future research could certainly benefit from better understanding this finding.

Concluding thoughts

This paper has been a historical expedition that has been enjoyable and rewarding. The opportunity to review the past while analyzing its impact on modern business is one that should not be overlooked. Through a broad academic business literature review, it was discovered that the pioneers on that original list compiled by Wren and Hay (1977) were discussed in 101 different articles and generated over 5,000 hits in EBSCO. Furthermore, it was shown that, over the past 30 years, the academic community has promoted the works of some of the great men and women on the list, thus keeping them strongly implanted in our institutional memory, while others have fallen into obscurity. The results of the new study informed our thinking but, left us wanting to know more about the contributions of the top ten pioneers. There are seven new names on the list, while three remained steadfast. Frederick Taylor is distinguished in that he remained number one 30 years later. It will be interesting to see if he remains at the top in another 30 years. Most importantly, there is a wonderful story to tell about every person on the list.

In 1977, perhaps the call would have been to pick up your pen and write. Recently, it is position your fingers on your keyboard and type. Beu and Leonard (2004) argued that to continue to “spread the gospel” of the great works it is the responsibility of both popular and academic press. It is time to capture the contributions of these great men. Let us celebrate their lives and their contributions through the written word. We have a new list of pioneers to recognize and it is our obligation to not let them fade into inconsequentiality. As stated by one of the great modern historians, Wren (1994, p. 442), “Today is not like yesterday, nor will tomorrow be like today, yet today is a synergism of all our yesterdays, and tomorrow will be the same. There are many lessons in history for management scholars, and the most important is the study of the past as prologue”.

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