Defining Performance in Public Management: Variations over time and space

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Lukas Summermatter and John Philipp Siegel

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Please note: An earlier version of this paper – though with a substantially narrower scope – was presented at the Permanent Study Group on Performance in the Public Sector, European Group of Public Administration Conference 2008, Rotterdam, The Netherlands, on September 3, 2008, under the title “Defining Performance in Public Management: A Survey of Academic Journals”. Comments and recommendations from the conference have been integrated in this proposal. The authors thank Christopher Pollitt and other members of the study group for their helpful suggestions.

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ABSTRACT

Performance in the public sector is an ambiguous, multi-dimensional, and complex concept. It is also one of the most popular concepts in current public management theory and practice. Furthermore, it can be assumed that performance is also a dynamic concept that varies across geographical as well as scholarly ‘schools of thought’. Thus, what is defined as performance and its crucial elements changes and differs depending on time and space. Up to now, no comprehensive analysis of these variations has been conducted even though this is necessary to observe and understand variations in the definition of performance as a key concept of public management. As a consequence, this paper improves our understanding of the various definitions and conceptions of performance across time and (geographical as well as academic) space.

In this paper, results of a comprehensive survey of academic journal articles dealing explicitly with theoretical or empirical aspects of performance are presented. It focuses on answering the following research questions: How is performance being defined in the academic literature, what are the (most often used) components of these definitions and what are the relations between them? Are there any significant differences in the definitions and their components depending on time, on the geographical application of the concept, on the affiliation of the respective authors? How can the most important differences be explained? The study is based on a literature review and the analysis of more than 300 papers since 1988 containing substantial definitions of performance.

Results show that elements of the ‘output’ and ‘outcome’ categories are the most frequent while ‘ratios’ and especially ethical concerns (such as equity or fairness) only play an inferior role in the definitions. As far as bivariate relations are concerned, there are especially frequent relations between ‘output’ and ‘outcome’ components and especially strong relations between ‘efficiency’ and ‘effectiveness’ elements. Time and space both have got an influence of applied performance concepts. Time affects primarily the complexity of performance definitions, whereas space plays an important part in explaining different focuses in performance definitions.

As a conclusion, it is suggested that researchers should avoid using the term performance if it is not in the core of their research interest, or to define exactly how the term and its components are understood, or to engage in the complexity of a broad performance concept. However, it seems obvious that the application of a unitary concept of performance is out of reach – and is inappropriate given the multi-dimensional character of the phenomenon.
1. INTRODUCTION

Performance is one of the most important as well as ambiguous concepts in the academic public management debate. Performance measurement is crucial for the most of the recent approaches to public management reform; performance orientation is probably one of its few universal elements across countries, sectors, levels of government, and different types of organization. However, this paper assumes that there is a multiplicity of conceptions of performance used in the discourse (and even more in public administration’s “real world”), entailing misunderstandings, false conclusions, or even conflicts. Since performance is such a crucial and basic concept, clarification is essential in order to promote reasonable discussion and to advance conceptual consensus-building which is in turn a fundamental requirement for empirical research.

In their recent book, Bouckaert & Halligan (2008, p. 14) refer to Bovaird (1996, p. 147) arguing that performance is neither a unitary concept nor is it unambiguous. They differentiate between a span and a depth of performance. The span of performance comprises of the relations between input, activity, output, effect/outcome and trust – admitting that there are major disconnects between outputs and effects/outcome and between the latter and trust. The depth of performance is based on a distinction of three levels of performance: micro performance refers to the individual public sector organisation, the meso performance to a policy, and the macro performance to the government or governance as a whole (Bouckaert & Halligan, 2008). This corresponds with de Bruijn’s (2002, p. 7) notion that “performance is multiple and is achieved in co-production”. He also applies elements such as direct (outputs) and final effects (outcomes) adverting to the fact that this terminology is ambiguously used in the literature. In her critical account of the performance “movement”, Radin (2006) defined several of the relevant terms, arguing that the performance vocabulary “emphasizes the rigor of following a logical process, it focuses on the ultimate outcomes, and it relies on the collection and interpretation of data” (Radin, 2006, p. 16). Hatry (1999, p. 3), one of her primary targets, for example, defined performance as “the results (outcomes) and efficiency of services or programs”. Also the OECD (1994) has applied the terminology, understanding performance as economy, efficiency, effectiveness, service quality and financial performance.

Obviously, ”performance in the public domain is an elusive concept” (Stewart & Walsh, 1994, p. 45). It is difficult to define and measure because, according to Brewer & Selden (2000, p. 685), “[s]takeholders often disagree about which elements of performance are most important, and some elements are difficult to measure […] and because] tinkering with agency performance also has strong political implications”. Nevertheless, “[n]umerous scholars throughout the development of organization theory have focused on developing the best way to define and/or measure organizational performance […]. The explosion of research has unfortunately left the field with numerous and often conflicting models […]. Overall, the knowledge base is far from clear about what the most important explanatory factors for assessing and measuring the performance of public and nonprofit organizations are” (Selden & Sowa, 2004, p. 395).

As a consequence, this paper is aimed at improving our understanding of the various definitions and conceptions of performance across time and (geographical as well as
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academic) space. Therefore, a comprehensive literature survey and analysis is being carried out and its results are presented in this paper. The analysis contains the relevant content of 320 articles in refereed academic journals since 1988.¹ It focuses on answering the following research questions:

1. How is performance being defined in the academic literature, what are the (most often used) components of these definitions and the relations between them?
2. Are there any significant differences in the definitions and their components depending on journal?
3. Are there any significant differences in the definitions and their components depending on time?
4. Are there any significant differences in the definitions and their components depending on the geographical application of the concept (e.g. the country considered in the paper)?
5. Are there any significant differences in the definitions and their components depending on the affiliation of the respective authors (e.g. the country they work in)?
6. How can the most obvious differences in defining performance be explained?

For this purpose, the selected articles have to deal explicitly with theoretical or empirical aspects of performance management or measurement in the public sector. First, definitions of performance are being extracted from the texts and decomposed into their components. Then, a statistical analysis of the components (and their combinations) is run to identify the impact of time and space on the way performance was defined. Third, a discussion of the most interesting results takes place, trying to filter out a “mainstream” definition of performance for certain time, space and academic clusters – and its implications for public management theory and empirical research.

2. METHOD AND DATA COLLECTION

To find answers to the above-mentioned research questions, a comprehensive analysis of scientific papers has been carried out. Papers were selected from 15 academic journals (cf. Table 1). In a first pass, all articles published since 1988 containing ‘performance’ in their title (and/or abstract) were selected (column ‘Hits’ in Table 1). In a second round, only those articles were kept in the selection, which deal explicitly with theoretical or empirical aspects of performance management or measurement in the public sector (column ‘Articles selected’ in Table 1). Finally, the sample contained 320 papers from 14 journals.

Each article in the sample was searched for a definition of performance. We hoped to find more or less clear statements about the understanding of performance in the analysed article. However, we soon learned that most articles do not contain one clear definition of performance, but point out their understanding of performance in one or more passages in the course of the text. Therefore, we scanned through all papers not only for explicit definitions but also for statements about the papers concept of performance.

<table>
<thead>
<tr>
<th>Journals</th>
<th>Hits²</th>
<th>Articles selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and Society</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Australian Journal of Public Administration</td>
<td>29</td>
<td>20</td>
</tr>
<tr>
<td>Governance</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>International Journal of Productivity and Performance Management¹</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>International Journal of Public Administration²</td>
<td>111</td>
<td>24</td>
</tr>
<tr>
<td>International Public Management Journal</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>International Review of Administrative Sciences</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Journal of Policy Analysis and Management</td>
<td>57</td>
<td>11</td>
</tr>
<tr>
<td>Journal of Public Admin. Research &amp; Theory</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Public Administration</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>Public Administration and Development³</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Public Administration Review</td>
<td>93</td>
<td>47</td>
</tr>
<tr>
<td>Public Management Review</td>
<td>53</td>
<td>18</td>
</tr>
<tr>
<td>Public Performance and Management Review</td>
<td>68</td>
<td>60</td>
</tr>
<tr>
<td>The American Review of Public Administration</td>
<td>54</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>664</td>
<td>320</td>
</tr>
</tbody>
</table>

Table 1: Journals and articles analysed

3. **EXPLORING AND CATEGORISING ELEMENTS OF PERFORMANCE DEFINITIONS**

First, we searched the articles for elements of performance definitions. These are key terms and concepts, describing or obviously implying, what performance means to the respective authors. That survey resulted in a comprehensive list of several hundred items that had to be classified in order to manage the complexity of items. Therefore, we basically relied on the classical input-output-outcome model and its amplifications, especially the 3E-concept, applying the following categories in the sense of dimensions of performance:

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² Number of papers containing “performance” in the title or abstract.
³ Search limited to papers with “public sector” in any field.
⁴ Papers containing only ”National Performance Review” were excluded.
⁵ Search limited to papers with “performance” in the title.
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<table>
<thead>
<tr>
<th>Dimension</th>
<th>Subsumed terms and concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>costs, budgets, expenses, revenue, expenditure, economy, resources</td>
</tr>
<tr>
<td>Throughput</td>
<td>process, production process, organizational processes, activities, capacities, operations, volume of work, workload, levels of activity or of proficiency, operating characteristics</td>
</tr>
<tr>
<td>Output</td>
<td>results end of the production process; quantity and quality of outputs, services</td>
</tr>
<tr>
<td>Outcome</td>
<td>effects, results, impacts, benefits, public value, accomplishments, consequences</td>
</tr>
<tr>
<td>Efficiency</td>
<td>relation of “efforts to outputs”, the &quot;ratio of output to input&quot;, technical efficiency, “cost per unit of output”, relative efficiency “</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>“how well services or programs meet their objectives”, “a measure of outcome, illustrating the result or impact of a service”, “the extent to which customer requirements are met, “cost-outcome measures”</td>
</tr>
<tr>
<td>Additional types of ratios</td>
<td>Productivity, “value for money”, cost effectiveness, return on investment, “return on taxpayer money”, unit or per capita costs</td>
</tr>
<tr>
<td>Quality</td>
<td>quality of staff activity, services or outputs, “extent to which the nature of the output and its delivery meet requirements or are suitable to their purpose”; “conformance, reliability, on-time delivery”.</td>
</tr>
<tr>
<td>Requirements</td>
<td>Targets, goals, objectives, standards, timeliness, pledges, benchmarks</td>
</tr>
<tr>
<td>Stakeholder-related aspects</td>
<td>“consumer’s evaluation of various features or facets of the product or service, based on a recent consumption experience”, satisfaction, trust of actors and stakeholders, customer satisfaction</td>
</tr>
<tr>
<td>Value and ethical aspects</td>
<td>“equity, transparency, or other democratic values”, equity, &quot;equitable distribution of benefits&quot;, fairness.</td>
</tr>
</tbody>
</table>

Table 2: Terms and concepts of performance dimensions

This categorisation can be criticised for being arbitrary to some extent. However, it is more important to identify the various and numerous items related to those categories in the first place.

Even though the identified dimensions are hardly surprising, it is amazing that on the other hand, there is certainly no explicit or implicit consensus about performance of public institutions. Of course, this is a consequence of the insight that it is socially constructed reality (Newcomer, 2007, p. 317) or phenomenon “that is subjective, complex, and particularly hard to measure in the public sector” (Brewer & Selden, 2000, p. 288). Furthermore, performance is a normative concept especially since a more or less obvious underlying of many texts dealing with performance is the notion that public sector institutions should engage in performance-related activities, such as measuring and improving performance. Thus, it is also not surprising that performance often appears in connection with similarly broad, ambiguous and value-laden concepts such as progress, excellence, success, improvement, competitiveness – the latter aspect is often debated in the literature. In our analysis, we also looked for elements of another category: individual performance. However, we do not elaborate on this – certainly very important and interesting – dimension since we focus on aspects on institutional performance only.

As a consequence of these differences, there is also no consensus about what constitutes appropriate performance measures, indicators or indices. Apparently, the discussion about this is huge and its complexity might easily be traced back to the ambiguity of performance itself – but also to the variety of objects of performance. For instance, in the articles we examined performance referred to governments, jurisdictions, organisations, agencies, projects, processes, strategies, programmes, policies, and individuals. Furthermore, we should also keep in mind Patricia Ingraham’s (2005, p. 394) notion that “[i]n this increasingly interdependent world, effective performance is sometimes when nothing at all happens. Everyone needs to understand that. For many public agen-
cies—maybe most—good performance is averting crisis, preferably in a way that no one ever knows about”.

4. ANALYZING RELATIONS BETWEEN PERFORMANCE DIMENSIONS

After having identified dimensions of performance, we looked at combinations of these dimensions. This section describes the explorative way we analyzed the data.

Fifty four out of the 320 papers contained no definition of performance. Performance definitions of the other 266 papers are used as sample for analysis described in the following sections. However, given the categories that we have defined, it is worth mentioning that the number of categories reflected in the various definitions various substantially. The mean is 4.91 and standard deviation is 2.44 (cf. Figure 1).

![Figure 1: Frequency of dimensions per definition](image)

4.1. Frequencies of dimensions

As a first step of analysis, we counted the appearance of each performance dimension in the 266 definitions. Results presented in Figure 2 show considerable differences between frequencies of dimensions. Outcome (68 %) and output (66 %) are the two most frequently mentioned terms. In contrast, values&ethics (17 %) and ratios (25 %) are the least often mentioned categories.
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Figure 2: Percentages of performance dimensions

In a next step, we looked at relations between two dimensions at a time. We calculated frequencies and significant correlations (cf. Table 3) of pairs of dimensions in crosstabs.

Table 3: Frequencies and correlations between pairs of dimensions

Table 3 shows the frequency of each pair of dimensions within the 266 performance definitions. For example, 134 of 266 definitions contain the pair 'output-outcome', the most frequently used pair. In contrast, only 15 definitions include the pair 'ratios-values&ethics'.

Significance of associations has been calculated for all pairs using chi-square statistics. Phi-values in Table 3 indicate strengths of associations between two dimensions. Sig-
significant correlations are marked light or dark green, depending on the level of significance.

Results of these two evaluations show several **significant as well as frequent** relations between two dimensions (cf. Figure 3). The blue arrow indicates key categories according to the input-output-outcome model; lines between the categories illustrate relations that are both frequent and statistically significant.

![Significant and frequent relations between two dimensions](image)

**Figure 3:** Significant and frequent relations between two dimensions

Other relations are **significant** but not frequent. Amongst others are these relations between the categories throughput and input, efficiency, effectiveness, quality, and requirements. Several relations with values&ethics elements are significant but not frequent. A strong but not frequent relation exists also between quality and stakeholder orientation.

A third group of relations occurs frequently, but is not significant. There are two relations with Requirement elements (efficiency and effectiveness) occurring often but which are not significant. Interesting is the frequent but not significant combination of outcome elements with efficiency and effectiveness elements, respectively.

### 4.2. Differences depending on journal

Since we conducted a literature review it is worth noting where the articles in the sample were published. Most articles originate from the Public Performance & Management Review (PPMR) and the Public Administration Review (PAR) (cf. Table 1). Articles from these two journals represent 36 percent of the sample. The mean of the number of categories per performance definition varies significantly between journals (cf. Figure 4).

PPMR has not only contributed heavily to our sample which is hardly surprising considering it is the only journal we looked at dealing prominently and explicitly with aspects of performance in the public sector. We can also see in Figure 4 that in PPMR articles the most comprehensive definitions are applied in the sense that they include more performance definition categories than in any other journal. More than 70 percent of the articles published there include definitions representing more than 5 categories. By contrast, more than four out of five definitions in PAR articles include fewer dimensions than the mean, and, thus, take into account a less complex understanding of performance.
If we look at the performance definitions in detail this fact becomes more obvious. Because one third of the articles in our sample originate either from the PPMR or from the PAR these two journals were used as basis for an in-depth analysis. One can see that in PPMR articles all categories are represented much more frequently than in PAR; in most categories the difference is statistically significant (cf. Table 4). Differences are not significant only for the outcome, efficiency, and ratios categories.

<table>
<thead>
<tr>
<th>Dimensions in PPMR and PAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAR</strong></td>
</tr>
<tr>
<td>Input</td>
</tr>
<tr>
<td>Throughput</td>
</tr>
<tr>
<td>Output</td>
</tr>
<tr>
<td>Outcome</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Effectiveness</td>
</tr>
<tr>
<td>Ratios</td>
</tr>
<tr>
<td>Quality</td>
</tr>
<tr>
<td>Requirements</td>
</tr>
<tr>
<td>Stakeholder</td>
</tr>
<tr>
<td>Values &amp; Ethics</td>
</tr>
</tbody>
</table>

Table 4: Differences depending on article type

We classified all papers in three groups distinguishing between the types of articles. First, we differentiated between theoretical and empirical articles. Within empirical papers, we made a difference between qualitative and quantitative studies. Articles using some quantitative methods were labelled 'quantitative', also if they applied a mixture of quantitative and qualitative methods.

Out of the 266 articles, 207 (78%) can be characterized as empirical and 59 (22%) as theoretical studies. 112 papers (42%) have been classified as qualitative studies and, thus, followed a qualitative approach while 95 (36%) where considered as quantitative studies.

Figure 4: Number of dimensions per article sorted by journal
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Table 5: Dimensions sorted by type of article

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Qualitative</th>
<th>Quantitative</th>
<th>Theoretical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>54%</td>
<td>39%</td>
<td>56%</td>
</tr>
<tr>
<td>Throughput</td>
<td>38%</td>
<td>33%</td>
<td>37%</td>
</tr>
<tr>
<td>Output</td>
<td>67%</td>
<td>66%</td>
<td>61%</td>
</tr>
<tr>
<td>Outcome</td>
<td>67%</td>
<td>55%</td>
<td>73%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>62%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>48%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Ratios</td>
<td>20%</td>
<td>32%</td>
<td>25%</td>
</tr>
<tr>
<td>Quality</td>
<td>20%</td>
<td>32%</td>
<td>29%</td>
</tr>
<tr>
<td>Requirements</td>
<td>33%</td>
<td>42%</td>
<td>56%</td>
</tr>
<tr>
<td>Stakeholder Values</td>
<td>63%</td>
<td>42%</td>
<td>36%</td>
</tr>
<tr>
<td>&amp; Ethics</td>
<td>37%</td>
<td>38%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Sig. at 0.05 level | Sig. at 0.01 level | Not significant

As Table 5 illustrates, in some key categories such as outputs or effectiveness there were practical no differences depending on the type. However, we can see that quantitative studies tend to exclude the requirements (goals, standards, benchmarks…) dimension as well as input aspects while emphasizing ratios (like productivity or cost-effectiveness); qualitative studies seem to relatively ignore the value-related aspects of performance. However, these differences do not lead to a general differentiation between qualitative studies and quantitative articles regarding the number of performance elements per definition. Also, no significant differences exist between empirical and theoretical articles.

Figure 5 illustrates the relation between types of articles and the journals. There is a significant variation of types of articles between journals. The proportion of quantitative studies in the Public Administration Review, for example, is considerably higher than in the Public Performance and Management Review.

Figure 5: Type of article sorted by journal

4.4. Differences depending on time

If we look at the role of time in the way performance is defined we first have to take a look at the time the articles in the sample have been published. In our twenty-year time-span, the number of relevant articles published per year is far from equal (cf. Figure 6). As a matter of fact, half of the articles have been published only since 2005!
Furthermore, our results indicate that with the growing number of relevant articles published also the number of categories (Pearson correlation = .185 at 0.01 level) – and, hence, complexity of performance definitions has increased. For example, since 2004 the mean number of dimensions has always been above the overall mean. If we look at Figure 7, this trend is illustrated quite obviously.
Taking this evidence into account, we should have a closer look at the categories over time in detail. Therefore, we make a distinction in terms of time of publication between the first half (1988-1998) and the third (1999-2003) and fourth quarter (2004-2008). Table 6 contains detailed information about the use of performance definition categories in these phases.

<table>
<thead>
<tr>
<th></th>
<th>Input</th>
<th>Throughput</th>
<th>Output</th>
<th>Outcome</th>
<th>Efficiency</th>
<th>Effectiveness</th>
<th>Ratios</th>
<th>Quality</th>
<th>Requirements</th>
<th>Stakeholder</th>
<th>Values&amp;Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st half</td>
<td>48%</td>
<td>30%</td>
<td>45%</td>
<td>55%</td>
<td>55%</td>
<td>45%</td>
<td>23%</td>
<td>30%</td>
<td>53%</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>3rd quarter</td>
<td>41%</td>
<td>25%</td>
<td>67%</td>
<td>68%</td>
<td>45%</td>
<td>42%</td>
<td>22%</td>
<td>29%</td>
<td>45%</td>
<td>29%</td>
<td>14%</td>
</tr>
<tr>
<td>4th quarter</td>
<td>53%</td>
<td>42%</td>
<td>71%</td>
<td>71%</td>
<td>62%</td>
<td>52%</td>
<td>27%</td>
<td>39%</td>
<td>56%</td>
<td>45%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Table 6: Dimensions sorted by time phase

The most significant change over time is the increasing use of the output and stakeholder categories. The categories growing considerably more frequent over time are outcome, effectiveness and quality. On the other hand, the input, ratios, requirements and values&ethics dimensions remain relatively stable. Efficiency as a very prominent category increases substantially from the third to the fourth quarter but with a highly visible setback from the first half to the third quarter; the same is true (and significant) for the throughput dimension. If we have a closer look at the Table 6, we can see that the high importance of the output, outcome and efficiency dimensions in the overall sample is accounted for by their relative impact in the second half, especially in the fourth quarter – and these are the years 2004 to 2008! In addition, data shows that the two least important categories (ratios, values&ethics) also have seen little change over time.

4.5. Differences depending on the observed country

Another aspect to be considered is the question of whether or not, and how, the country matters that the studies in the sample focus on. More than two fifths of articles we have analyzed deal explicitly with the United States (cf. Table 7).

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>112</td>
<td>41.5</td>
</tr>
<tr>
<td>GBR</td>
<td>33</td>
<td>12.2</td>
</tr>
<tr>
<td>AUS</td>
<td>20</td>
<td>7.4</td>
</tr>
<tr>
<td>NZL</td>
<td>12</td>
<td>4.4</td>
</tr>
<tr>
<td>SWE</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>GHA</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>NED</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>INA</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>NOR</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>270</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 7: Observed countries used in at least 4 articles

Since the U.S. is so prominent in our sample it is worth noting what the most frequent performance categories are in connection to those studies (cf. Table 8). Here we can see
a strong emphasis on outcomes and also a high relevance of the output, efficiency, and requirements dimensions. However, it also makes sense to compare these results to the use of performance definition categories related to other countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Input</th>
<th>Throughput</th>
<th>Output</th>
<th>Outcome</th>
<th>Efficiency</th>
<th>Effectiveness</th>
<th>Ratios</th>
<th>Quality</th>
<th>Requirements</th>
<th>Stakeholder</th>
<th>Values &amp; Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUS</td>
<td>65%</td>
<td>30%</td>
<td>75%</td>
<td>70%</td>
<td>65%</td>
<td>60%</td>
<td>10%</td>
<td>30%</td>
<td>65%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>GBR</td>
<td>52%</td>
<td>39%</td>
<td>67%</td>
<td>39%</td>
<td>73%</td>
<td>58%</td>
<td>27%</td>
<td>39%</td>
<td>39%</td>
<td>45%</td>
<td>15%</td>
</tr>
<tr>
<td>NZL</td>
<td>92%</td>
<td>33%</td>
<td>83%</td>
<td>67%</td>
<td>56%</td>
<td>50%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
<td>75%</td>
<td>33%</td>
</tr>
<tr>
<td>USA</td>
<td>45%</td>
<td>34%</td>
<td>59%</td>
<td>74%</td>
<td>54%</td>
<td>49%</td>
<td>30%</td>
<td>32%</td>
<td>34%</td>
<td>54%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Table 8: Dimensions applied in articles focussing on four countries

In Table 8 we can observe relatively consistent percentages of the throughput, output, effectiveness, stakeholder and values & ethics dimensions but also some notable variation, for example as far as the key categories input, outcome and efficiency are concerned. A focus on New Zealand – and to a lesser extent on Australia – implies performance definitions highlighting inputs and requirements (such as goals and objectives). Obviously, efficiency plays a major role in how performance is defined with regard to the U.K.. On the other hand, outcomes are most prominent in the U.S. context and clearly play an inferior role in U.K. context.

4.6. Differences depending on authors and their location

Yet another source of distinction in the way the performance concept is used might be found in the authors of the respective studies or their institutional affiliation – usually the university they do work for. Our data does not support that proposition; at least there are no significant differences between authors and the number of performance dimensions they apply in their articles. However, it is possible to detect specific individual as well as institutional approaches to the application of the performance concept in public sector research. For example, Table 9 illustrates this fact for the four most prevalent (co-)authors in our sample, representing 8,3 percent of all definitions.

<table>
<thead>
<tr>
<th>Author</th>
<th>Input</th>
<th>Throughput</th>
<th>Output</th>
<th>Outcome</th>
<th>Efficiency</th>
<th>Effectiveness</th>
<th>Ratios</th>
<th>Quality</th>
<th>Requirements</th>
<th>Stakeholder</th>
<th>Values &amp; Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyne George A.</td>
<td>42%</td>
<td>17%</td>
<td>75%</td>
<td>50%</td>
<td>75%</td>
<td>83%</td>
<td>58%</td>
<td>67%</td>
<td>8%</td>
<td>50%</td>
<td>33%</td>
</tr>
<tr>
<td>Meier Kenneth J.</td>
<td>18%</td>
<td>9%</td>
<td>73%</td>
<td>73%</td>
<td>27%</td>
<td>45%</td>
<td>82%</td>
<td>45%</td>
<td>18%</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>Moynihan Donald P.</td>
<td>29%</td>
<td>23%</td>
<td>43%</td>
<td>86%</td>
<td>57%</td>
<td>43%</td>
<td>14%</td>
<td>14%</td>
<td>29%</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>Walker Richard M.</td>
<td>38%</td>
<td>25%</td>
<td>88%</td>
<td>63%</td>
<td>75%</td>
<td>75%</td>
<td>63%</td>
<td>75%</td>
<td>0%</td>
<td>50%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 9: Dimensions sorted by important authors

A comparison of the three most often represented countries - they represent 76,5 percent of all cases - in which the authors' institutions are located shows several significant differences (cf. Table 10). Australian authors focus mainly on input, output and outcome elements in combination with requirements. They use these elements more often than
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Variations over time and space

British or U.S. authors, respectively. Articles from institutions in U.K. compared to U.S. articles contain relatively seldom outcome elements but more often efficiency and effectiveness elements.

<table>
<thead>
<tr>
<th></th>
<th>Input</th>
<th>Throughput</th>
<th>Output</th>
<th>Outcome</th>
<th>Efficiency</th>
<th>Effectiveness</th>
<th>Ratios</th>
<th>Quality</th>
<th>Requirements</th>
<th>Stakeholder</th>
<th>Values &amp; Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUS</td>
<td>70%</td>
<td>37%</td>
<td>61%</td>
<td>65%</td>
<td>59%</td>
<td>63%</td>
<td>7%</td>
<td>33%</td>
<td>63%</td>
<td>41%</td>
<td>19%</td>
</tr>
<tr>
<td>GBR</td>
<td>51%</td>
<td>43%</td>
<td>74%</td>
<td>45%</td>
<td>74%</td>
<td>60%</td>
<td>38%</td>
<td>42%</td>
<td>38%</td>
<td>36%</td>
<td>15%</td>
</tr>
<tr>
<td>USA</td>
<td>45%</td>
<td>37%</td>
<td>59%</td>
<td>60%</td>
<td>45%</td>
<td>31%</td>
<td>32%</td>
<td>51%</td>
<td>34%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

Table 10: Dimensions sorted by important authors’ location

5. DISCUSSION

How is performance being defined in the academic literature, what are the (most often used) components of these definitions and the relations between them?

The results of our study confirm the statements from the introduction that performance is an ambiguous and multi-dimensional concept. The concept is used in multifaceted ways and the underlying understandings are as diverse as the research topics and questions of the articles in the sample and the respective empirical contexts and applications of the performance terminology. Obviously, the academic literature is far from applying a consistent interpretation of what performance in the public sector means. On the one hand, this might be a result of the general attractiveness of this topic for researchers in the sense that performance is not a clearly defined concept or idea but a terminological umbrella or headline for very different fields of interest, empirical challenges and normative as well as prescriptive work done in the field of public administration and management. On the other hand, this contradicts the common claim of unambiguousness and intersubjective understandability of key concepts as a precondition for the scientific process. Even more, this is not only true for the term ‘performance’ but also for its components. If there is no consensus about what performance is and if it is also unclear what exactly are outputs, outcomes, efficiency, effectiveness, and so on, this makes communication in the scientific community about those aspects and relevant research very vulnerable for misunderstandings, frictional losses and conflicts. There are often no clear references that might be linked to a certain research tradition or school of thought, also.

However, this insight does neither come as a surprise nor is it new or untypical for social sciences. Pluralism in academic terminology – as well as in society – leads to increasing complexity of which the performance topic is an excellent example. We have to keep in mind that researchers (must) follow pragmatic considerations executing their projects – and feasibility demands reduction of complexity. Even though ‘performance in the public sector’ is the headline for a tremendous amount of research and publications, it comprises a lot of different specific research topics, interests and traditions. Thus, performance and its elements are used in a way that is pragmatic and result in an emerging, incremental process. This is not the place to argue whether the ambiguity of the ‘performance’ concept is good or bad – we just illustrate this as a matter of fact.
Our results show that elements referring to the output and outcome categories are (by far) the most often used in the definitions within the sample. Still, it is worth noting that both are not comprised in about one third of the definitions. However, it is obvious that outcomes and outputs are considered to be ‘mainstream’ elements of performance in the public sector. Ignoring these dimensions would be problematic. Taking this into account, it is fair to say that there is a consensus that performance in the public sector means outputs and outcomes of its individuals, organizations, or programs. This is especially true for the crucial role of the output category which is closely linked to seven of the ten other categories applied in this paper. Outputs and efficiency can be considered the classical cornerstone of performance, and efficiency, as could be expected, clearly links, inputs, throughput, and outputs.

There are two major bi-variate correlations. One is between the output and outcome categories, the other between efficiency and effectiveness. The output/outcome link reflects the two main categories of achievements or governmental processes and actions; the efficiency/effectiveness link corresponds accordingly with the respective ratios. It is worth noting that there is no statistically significant relation between outcomes and effectiveness – although this combination appears relatively frequently. A simple explanation would be that outcomes elements appear very often in combination with effectiveness, but nearly as often without. This could be interpreted as a certain leaning to directly measurable or observable phenomena rather than calculated ratios. On the other hand: If one of the ratios (efficiency/effectiveness) is applied, probably the other one is as well. Furthermore, since there is also a correlation between efficiency and inputs, the full scale classical 3E-model can be recognised.

*Are there any significant differences in the definitions and their components depending on journal?*

Our analysis has shown major differences between journals in regard to the number of categories used in corresponding articles. The PPMR-PAR comparison has disclosed that all eleven performance elements appear more frequently in PPMR articles than in PAR articles. Differences were significant in all but three categories - outcome, efficiency and ratios.

It seems that PPMR publishes articles with a rather comprehensive understanding of performance whereas PAR prefers articles with a focus on specific performance elements. outcome, efficiency, and ratios act as a common basis of performance definitions in both journals.

Results show a clear distinction between journals rather publishing articles with comprehensive performance definitions and journals with rather focussed definitions. It is noteworthy that only in two journals (PPMR and Australian Journal of Public Administration) more than half of the articles have got comprehensive performance definitions.

Whether or not journals influence performance conceptions is not answered yet. Presumably, reviewers and editors select papers with a certain performance understanding for their journal, rather than authors adapt their performance concept to the journals' one. Therefore, journals may act rather as a grouping variable than an influencing one.
Are there any significant differences in the definitions and their components depending on time?

As our results show, time matters if we want to understand the way performance is defined in the literature. Not only has the number of articles published on this topic increased dramatically especially in the last eight years. Furthermore, the definitions applied in those studies have grown more complex, comprising more and more dimensions of performance as we have defined them in the beginning. Since the year 2000 this trend is particularly obvious. It seems that the increasing amount of relevant publications is both means and end to the fact that the academic interest in aspects of public sector performance is soaring and has also given way to a differentiation process in the scientific community. This might indicate that there is tendency to

- define more clearly what exactly performance means or in what sense the concept is being used,
- accept the need for a more comprehensive application of this key concept
- address specific aspects of the concept while not excluding others.

This can be illustrated by the increasing relevance of the output and stakeholders dimensions. On the one hand, we pointed out earlier that outputs can clearly be considered as a key cornerstone of performance. This consensus in the literature seems to have broadened over the years. The same argument is true for the outcome dimension. On the other hand, the rise of the stakeholder dimension is an example for the increasing attention to elements of performance that were not in the focus earlier. That can also be said for the throughput and quality aspects. These three dimensions are not necessarily in the core of the concept but highlight that there is a rise in the attention paid to procedural aspects of performance; for example, quality links both stakeholder (e.g. customer) expectations and the production process of services – sort of the value chain of public sector activities. However, some categories remain relatively unchanged in their importance in defining performance, such as the input, ratios or values/ethics dimensions. Especially the latter two aspects play an inferior role anyway, and there has been little effort to change this.

As we pointed out above, the high importance of output, outcome and efficiency dimensions in the overall sample is accounted for by their relative impact in the second half, especially in the fourth quarter. By contrast, in the first half elements of only three categories where represented in more than half of the definitions. Consequently, definitions in that phase where not only less complex but also more uneven. We argue that the increasing consensus about both key dimensions and the appropriateness of more complex definitions (reflected in the number of categories applied) mirrors the acceptance in the scientific community that performance is a demanding concept but also implies the potential for adaption to specific research interests and agendas. Even if we are far from achieving the (unattainable) goal of the one standard definition, we seem to get closer to it without necessarily reducing its complexity which would be inappropriate given the phenomenon in the focus.
Are there any significant differences in the definitions and their components depending on the geographical application of the concept (e.g. the country considered in the paper)?

As we have pointed out, outcomes are most prominent in the U.S. context and clearly play an inferior role in U.K. context where efficiency is more important than as to the other three countries. Outcomes play a crucial role in most approaches to performance in the U.S. at all levels of government. For instance, the Government Performance and Results Act of 1993 mandated strategic and performance planning on an outcome-oriented basis; also many state governments interpreted their “management by results” in an outcome-focussed way. Outcomes are by far the most important elements of performance definitions in the U.S. context and given the dominant role of studies on the U.S. in the sample, the high relevance of this category in the overall sample is accounted for by this fact. Contrariwise, the importance of the outcome dimension would reduce substantially if we took the studies on the U.S. out of the sample. Thus, outcomes play a much less significant role in the rest of the world.

It would be very interesting to draw similar comparisons between other countries, if there would be enough examples.

Are there any significant differences in the definitions and their components depending on the affiliation of the respective authors (e.g. the country they work in)?

The relative importance of a single author compared to the sample is low. Thus, requirements for significant differences between authors are high. No differences could be found in respect of the basic performance elements input, throughput, output, and outcome. However, results show significant differences for efficiency, ratios, quality and values&ethics dimensions. Because Boyne and Walker have written several articles together, it's not surprising that their performance definitions are similar, both using efficiency, quality and values&ethics elements relatively often. Interesting are also Meiers' performance definitions. He uses efficiency very seldom, but other ratio elements very often.

Between the three analysed authors' locations (AUS, GBR, USA) prominent differences exist regarding seven of 11 performance categories. It is striking that differences between locations are quite the same as between the observed countries. This finding is illustrated in Table 11 using the example of the USA.

<table>
<thead>
<tr>
<th>USA as…</th>
<th>Input</th>
<th>Throughput</th>
<th>Output</th>
<th>Outcome</th>
<th>Efficiency</th>
<th>Effectiveness</th>
<th>Ratios</th>
<th>Quality</th>
<th>Requirements</th>
<th>Stakeholder</th>
<th>Values&amp;Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case (%)</td>
<td>44.6</td>
<td>33.9</td>
<td>58.9</td>
<td>74.1</td>
<td>53.6</td>
<td>49.1</td>
<td>30.4</td>
<td>32.1</td>
<td>54.5</td>
<td>36.6</td>
<td>13.4</td>
</tr>
<tr>
<td>Authors' location (%)</td>
<td>44.6</td>
<td>37.1</td>
<td>59.2</td>
<td>79.8</td>
<td>52.6</td>
<td>44.6</td>
<td>30.5</td>
<td>31.9</td>
<td>51.2</td>
<td>33.8</td>
<td>13.1</td>
</tr>
</tbody>
</table>

Table 11: Use of performance dimensions with regard to the U.S. as case country and as authors' location

Table 11 shows impressively the congruence of performance conceptions between authors from the USA and authors using the USA as case. One explanation is that authors
from the USA write about the USA. Considering the oversampling of U.S. papers, that would be a prominent explaining factor for the performance conceptions in our sample.

A question that cannot be answered in this paper is whether or not certain authors have such an influence that others will take over their performance conceptions. Or in other words, are there any schools of thought in using performance definitions?

**How can the most obvious differences in defining performance be explained?**

First of all, we have to record that all factors analyses have got in some way an influence on performance concepts: journals, types, time, observed countries, authors, and authors' locations.

Space related factors are highly depending on each other, e.g. author and others' location. In addition, we could show that the observed country and the authors' location are often the same. Taken these factors together space plays an important part in explaining differences in performance definitions in terms of what papers are focussing on.

Compared to the focussing factor space, time has got a different effect. In our analysis time didn't lead to a precise differentiation in terms the use of performance elements. But we could show a general tendency towards more comprehensive performance definitions, especially in the last four years. So, time affects primarily the complexity of performance definitions.

The other factors, Journals and Types, seem to have rather minor effects. In the case of Journals, it is not clear, whether they are cause or effect. Do journals really influence the type of performance definitions used in a paper or do journal editors and reviewers select papers with certain performance concepts?

### 6. CONCLUSIONS

As a conclusion, this study supports the assumption that performance in the public sector is a blurry, elusive concept. We can agree with Boyne & Dahya (2002, p. 181) who observed that “the underlying concepts of performance are implicit or underdeveloped”. This is neither a surprise nor a problem that we can expect to be solved. Consequently, it is more interesting to discuss how to deal with the ambiguity. As we have argued above, we could

- avoid using the term;
- make clear how we understand it, how we define the respective elements, and what are the assumed relations between them; or
- apply the term of a comprehensive definition.

The first option is not very realistic since the term is so widespread – it is actually often internalised in non-English languages –, appealing and intensively used in public management practice or even legislation. The second option is more practical but still leaves a lot of room for misunderstanding and, thus, for deficient communication within as
Well as between theory and practice. Anyway, this would at least be a realistic way to improve the way we analyse and debate performance, even though not an ideal one. In that sense we would suggest to talk about ‘performance as...’ or ‘in the sense of...’ for the sake of making communication about it clearer. The third option is the most demanding as it requires researchers to consequently apply not only some (they find interesting) but (almost) all relevant dimensions. This is not only problematic in terms of demarcation what does not belong to performance but also because it would complicate empirical and theoretical research substantially – eventually beyond the limits of feasibility. Obviously, the choice of one of these options depends on the respective focus and topic of research. For instance, authors should make clear whether they report research results under the performance ‘umbrella’ or about actual research on performance – in the broad or in a – however defined but clear – narrow sense. Taking the results of our analysis into account, a core definition of performance would most probably include outputs, outcomes, efficiency, and effectiveness as crucial dimensions. Inputs and requirements (like goals, objectives, or standards) might be adjusted. This interpretation certainly (not surprisingly) represents the mainstream of how performance in the public sector was and is understood in the academic literature. However, further research is needed to clarify trends in defining performance with regard to time and space. For instance, it could be argued that, while the ‘mainstream’ (or, if you want, orthodox) definition has been prominent for a long time and still has lead to a core idea of what performance is or should be, stakeholder-related, quality or ethical aspects are useful contributions to gain a broader, but also more complex and even more normative understanding of that concept.

We have shown that time and space (both in the sense of the country in the focus of research and where the author is located) matter. In our sample, definitions of performance in the public sector are dominated by the research from the last few years and the Anglo-Saxon, especially American, background. If we argue that complexity of definitions has increased and the debate is heavily influenced by the U.S. context, this can easily be explained by both the prominent role of performance management in practice and the significance of performance-related research in the American scientific community with its outstanding capacities. However, it is at least doubtful whether or not the rest of the world needs to follow their understanding or to what extent is possible to hold the ground. Even if we found that, for example, the numbers of dimensions used in defining performance increases, there are and will be specific approaches of what is of interest to researchers across the world and what is relevant for respective local practices of managing performance in the public sector.

Our paper is neither comprehensive in the sense of claiming to talk about the whole amount of literature on performance in the public sector nor does our sample of articles we analysed suggest a representative picture. To achieve that much more research would be necessary. There should be no doubt that this could be very fruitful – especially if additional categories, context variables and disciplines would be taken into account. However, it would be interesting, for example, to learn more about differences and similarities in defining performance regarding national and cultural aspects, professional logics, or the diffusion of terminology, relevant concepts and elements. It would be even more interesting to explain these differences and similarities. This would be particularly important if we agree with Bouckaert & Halligan (2008) on the idea of moving from (static, limited) performance administration to a more differentiated, man-
agement function-based ‘management of performances’; a shift that also reflects the fact demonstrated in this paper that there is not one-size-fits-all definition of performance.
7. REFERENCES

7.1. Evaluated Articles


Defining Performance in Public Management: Variations over time and space

Lukas Summermatter & John Philipp Siegel


7.2. Additional References


