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THE EVOLVING PRIVATE MILITARY SECTOR: A SURVEY

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by

Dr. Nick Dew and Lt. Col. Brian Hudgens

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The Evolving Private Military Sector: A Survey

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Nick joined the faculty at the Naval Postgraduate School in 2003 where he teaches strategic management in the MBA program. He researches the evolution of the RFID (radio frequency identification) industry and entrepreneurial decision making. His work has appeared in the *Journal of Evolutionary Economics*, the *Journal of Business Venturing*, the *International Journal of Entrepreneurship and Innovation* and the *Scandinavian Journal of Management*. For more information on entrepreneurial decision making, go to www.effectuation.org.

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1. Introduction

“Because they remain uncategorized by any formal measure, the exact number of PMFs [private military firms] that have entered the market is difficult to establish and it most definitely remains in constant flux. The global number is estimated to be in the mid-hundreds.” (Singer, 2003, p. 79)

The purpose of this research is to help the US Department of Defense and other government security communities better understand the evolving PM (private military) sector (Avant, 2005; Jager & Kummel, 2007; Singer, 2003). We anticipate our readers will be government agents, members of the international community, or others who wish to make informed decisions regarding the use of PMFs. This report discusses a beginning step in establishing a long-term program of research on the PM sector at NPS. It is expected that knowledge about the sector will be built incrementally through a series of individual studies; no one study will provide a complete picture of the relevant features of the sector. However, we believe a good starting point is to develop quantitative data about the industry, which this report attempts to do. We suggest three reasons why this is an appropriate place to begin.



First, while there are several conceptual and qualitative publications on the sector, there are very few quantitative studies. Therefore, there is an important gap in our knowledge that we propose to fill with rigorous quantitative data.

Second, without even rudimentary quantitative data, we have no way of knowing whether the firms that have been studied as individual cases (such as MPRI and Executive Outcomes) or those firms that have been given significant media attention (such as Blackwater and Halliburton) are typical industry participants or outliers. Thus, our starting point is to ensure that we have a reasonably accurate picture of the sector by compiling quantitative data on it. We need rudimentary data about the industry's size in aggregate (i.e., the demography of firms—cf. Singer's quote above), which major public corporations (such as the prime US defense contractors) are active in the sector and in what capacity, and the major capabilities of firms. Much of the data presented in this report fulfills these needs. The data is basic, but since our collective understanding of the sector is also fairly basic, this information may well be of some utility to readers of this report. As well as giving us a sense of what we think we already know, the data also provides a platform on which further studies can be built; i.e., it provides a context in which future research can be set. To proceed to these more advanced topics, we must first pass through the entry gate; that is, we must ensure that the basic building blocks for comprehension and analysis are in place. We think that at least some of the data we exhibit is new and has—as far as we know—never been presented before.

Third—and perhaps most importantly—while most of our data lends support to already-published literature, the process of studying a large data set and attempting to analyze it has brought to light certain discrepancies, inconsistencies and anomalies between the way the sector is sometimes described and the reality of the empirical data. This has led us to attempt our own re-description of the sector in a way we believe is more congenial to the data we have collected.

2. Methodology Used and Background to This Study

The data used in this report was collected primarily by three NPS MBA students (Jared Mitchell, Don Robbins and Chuck Dunar) working on their thesis project in the fall of 2007 under the supervision of Nick Dew and Bryan Hudgens. The combined faculty and student input into the data collection effort approximates one man-year of work.

Data collection proceeded through three phases. We started by assembling a list of firms known to be active, or to have been active at one time, in the PM sector. We screened various publications about the industry for an initial list of PMFs (for example, Avant, 2005; Singer, 2003). Based on this initial list of names, we assembled further names of firms using a snowball method (Goodman, 1961); i.e., our searches for information on the initial names invariably turned up new firms, which we then added to the list. We kept working on the snowball until we exhausted the search for new names; i.e., further searches did not reveal any new firms. Almost all of this searching was conducted online, using various databases available through the NPS library and public resources available via online search engines. Using this methodology, we assembled a list of 550 firms “named” by one source or another as having been active in the sector.

Second, we found that many firms in the sector have a website which offers information about the organization. Using these and other resources, we assembled more detailed data on



the firms in our sample—such as their founding date, founder background information, country of origin, and data on the capabilities these firms purport to have.

Third, one of us conducted follow-up and fill-in data gathering on specific firms as part of the writing of this report.

Further elements leading to the assembly of this report included coding data in our database, analyzing the raw and coded data, and presenting it in easily understood formats. Coding (for instance) of capabilities was conducted by two of us (one student, one author). This process was particularly lengthy and laborious, since it involved over 2,500 lines of data on capabilities, many redundant descriptions of capabilities, and much recoding work in order to get the data into a “clean” format. Individual fields were coded independently, and critical variables (such as codings of Singer’s “Tip of the Spear” schema and Avant’s categorization scheme for contract types) were coded by both coders. Though we have not yet measured inter-rater reliability of these codings, we estimate that more than 80% of codings are identical.

The analysis process involved several iterations in order to produce the final charts, graphs and data presented in this report. The final portion of the research process involved both finding ways to display the data in formats that are easy for the reader to understand and writing this report.

The limitations of this study are worth particular attention. For most data categories, the data on PMFs is incomplete. For instance, we managed to find data on the founding dates of approximately 230 firms (approximately 40% of our sample). We obtained data (at least in some rudimentary form) on capabilities for approximately 70% of firms, but the quality of this data (measured in terms of its comprehensiveness and trustworthiness) varies considerably. The bottom line of our data-collection effort is that we can only analyze the data available, doing our best to verify its reasonableness as we go. We cannot attest for the accuracy of some aspects of this data—for example, that the capabilities firms purport to have are “true.” Of course, the accuracy of self-reported data is a problem for researchers generally, and not for our study alone.

However, we do not know of any database on the industry that is more comprehensive than the one we have assembled. As far as we know, the sample size we have used is much larger than any other so far studied in the sector, and this should make our results more robust because of the (generally) favorable statistical properties of large samples.

3. Organizational Demographics of the PM Sector

Founding Dates, Population and Industry Growth

For this study, we traced data on 550 firms that appear to have been active in the PM sector. Of these, we were able to find data on the founding dates of approximately 230 firms. Based on this sample of 230 firms, the following pattern of industry entry emerges:



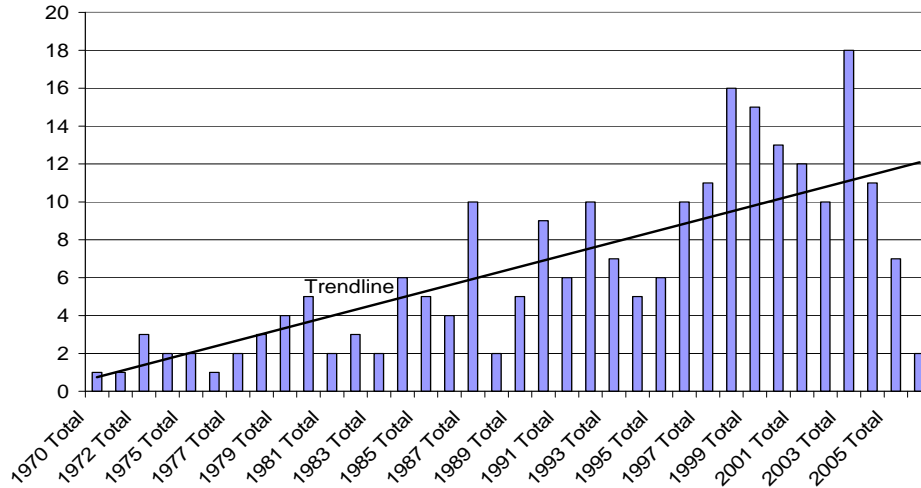


Figure 1. Pattern of PMF Founding by Year 1970-2006

Further examination of the data indicates that half the firms for which we managed to find founding dates were founded between 1995 and 2007; the other half were founded before 1995. This makes the PM sector a relatively young industry: half the industry is less than 13 years old; thus, the median age of firms is quite low. This fact is an interesting contrast to the history of mercenary companies, which, of course, has very deep roots—stretching back at least until the Early Modern period (15th and 16th Centuries) (Ortiz, 2007a).

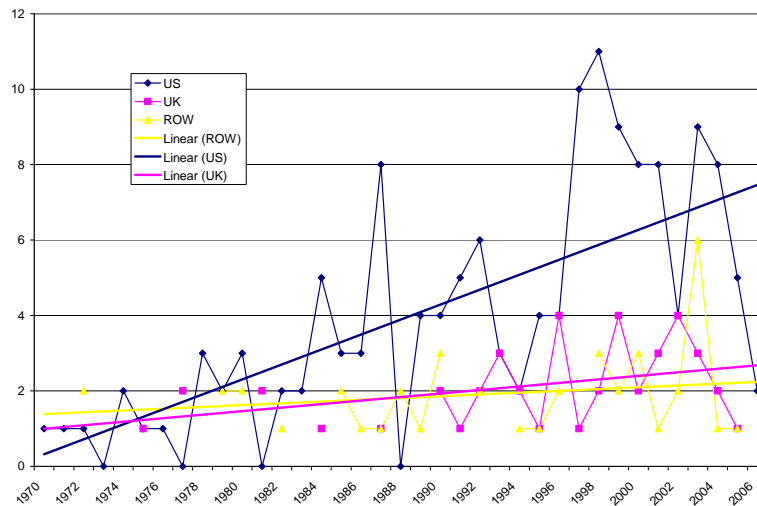


Figure 2. PMF Founding Pattern by Region

Figure 2 suggests that the recent wave of entry of PMFs is predominantly a US effect. Note in particular the trend lines for firm foundings: the US trend line is rather steep, whereas the UK and ROW (rest of world) trend lines are almost flat. What this trend suggests is that PMF growth is being driven by US effects—such as outsourcing strategy in the late 1990s and the invasion of Iraq in 2003.

One possible way of thinking about entry into the PM sector is to categorize it as occurring in different “eras.” Table 1 indicates data on the average number of firms founded in three different eras.

Table 1. Summary of PMF Foundings in Three Different “Eras”

	SUM	YEARS	AVG
PRE-1970	35	25	1
1970-1989	64	20	3
1990-2001	120	12	10
2002-2006	48	5	10

If we examine this data graphically, we observe a different picture of the trends in PMF founding (note the trend lines are generally quite flat in Figure 3). Here, we can see that the surge in PMFs is a consistent feature of the post-Cold War era that is driven by new US firms entering the sector. This means that the sector growth is not a post-9/11 phenomenon (as is commonly thought), but a post-Cold War phenomenon.

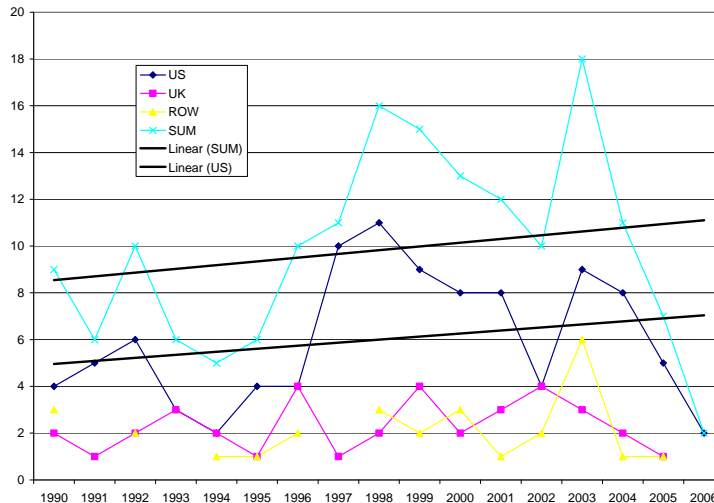


Figure 3. PMF Foundings 1990-2006

Geographic Distribution of PMFs

We found it comparatively simple to retrieve data on the nationality of PMFs. We found data for over 500 firms (90%) of our population. Note that our data is very consistent with the IPOA’s (International Peace Operations Association) surveys (2006 and 2007) that were based on much smaller samples.

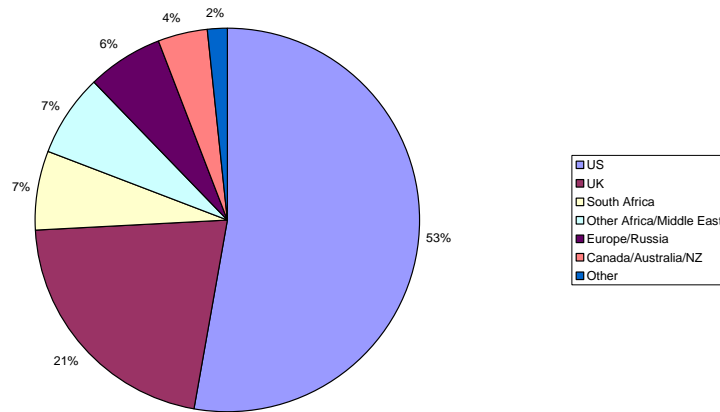


Figure 4. Geographical Distribution of PMFs

As is evidenced in the chart, the industry is a 50% US phenomenon and 20% UK. However, this was probably not always so. The tremendous growth in the number of US firms entering the industry in the past 10 years (see Figure 2) has probably changed the international composition of the industry. Prior to the burst of US entry, the industry was probably more cosmopolitan in its composition.

Several factors might explain this international distribution. One factor might be outsourcing and privatization, which may make PMFs more prevalent in the US and UK. Another factor may be demand factors—i.e., provision of surge capacity for the US and UK to meet their commitments in Iraq, Afghanistan and to the War on Terror. A further factor may come from the supply side—i.e., a distinct geographical pattern governing the distribution of skills required for establishing PMFs. This requires the *combination* of specialist military/security skills and generalist entrepreneurial skills. These may be more prevalent in the US and UK. Lastly, we have not yet tested this distribution for correlation with more general factors, such as defense spending in these particular geographies (PMFs per \$BN defense spend), population (PMFs per million), or economic scale (PMFs per \$BN GDP). Future research might endeavor to explore these and other possible relationships.

Founder Background for PMFs

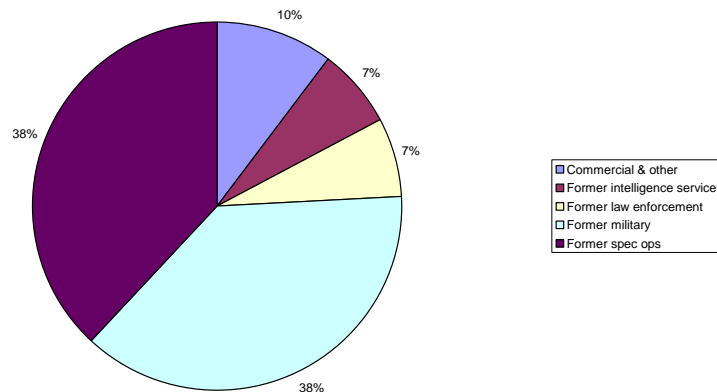


Figure 5. PMF Founder Backgrounds
(based on Data on 116 firms)

Figure 5 presents the data we managed to collect on founder characteristics for 116 PMFs (approximately 20% of our sample). What this reveals is initially unsurprising: most PMFs are founded by individual entrepreneurs or entrepreneurial teams that have prior military experience. However, the proportion of firms founded by individuals with special operations experience is a surprise: almost 40% of firms were founded by individuals with this background.

One possible explanation for this result is that our sample is skewed: perhaps firms founded by individuals with special operations experience are more likely to “tout” their qualifications. Other possibilities include both demand-side and supply-side factors. On the demand side, perhaps special operations skill sets are in particularly high demand in the PM sector, or these activities are seen as particularly good or easy targets for contracting-out.

On the supply side, one again wonders about the combination of skills required for running a successful PMF: perhaps individuals with entrepreneurial tendencies are more likely to select into special operations domains, or perhaps special operations experience tends to nurture particular organizational skills and self-confidence that lead individuals to participate in an entrepreneurial endeavor.

Based on our initial analysis, founder characteristics would make a good topic for future research on the PM sector.

Private/Public Split

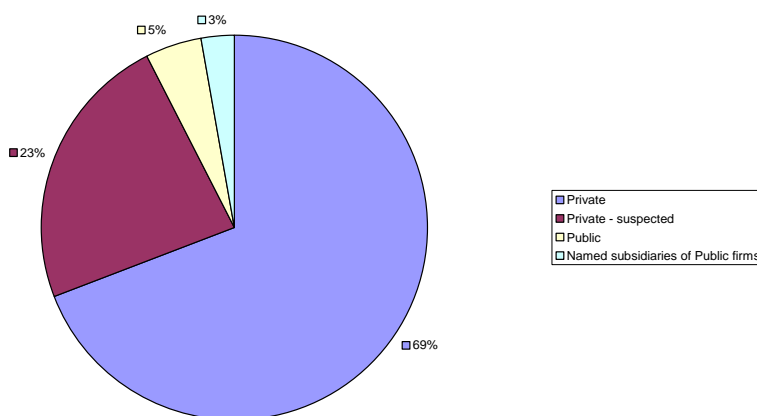


Figure 6. Public-private: PMF Status

Data we gathered indicates that well over 90% of the firms in the PM sector are privately held. Only a few firms (25) active in the sector are publicly held. This number is based on a generous definition of the industry and, therefore, includes the major defense contractors (the “primes”) and many firms that mainly supply IS/IT-related products and services to the DoD and other security agencies worldwide. The number of “pure play” public PMFs is, in fact, very low: only two firms in our sample meet this definition (DynCorp and ArmourGroup).

One important issue inherent in this analysis is the lack of transparency in the industry; this flaw is frequently highlighted by critics. PM-sector firms are perceived to be rather secretive (Avant, 2005). Our data points to the fact that there are two elements involved in this secrecy:

- First, private firms generally lack transparency to outsiders, regardless of their industry. Some of this is a systematic side-effect of being private, not the result of deliberate policy. After all, they are not required to be transparent, and they have no reason to be. If most PMFs are private, then one would expect the industry to lack transparency regardless of its activity type.
- Second, PMFs have other legitimacy-related concerns and sometimes security-related reasons for shying away from the public eye. Thus, their privacy, opaqueness, ambiguity and general lack of transparency may be a deliberate strategy. This element is over-and-above what is common to all private firms.

A second concern brought to light by our data is that—despite some claims to the contrary (for instance, Valero, 2008)—it seems rather unlikely that the PM sector will ever emerge as a significant aspect of the so-called military-industrial complex. The sector’s organization is quite dissimilar from that of equipment manufacturers; unlike the manufacturing sector, the PM sector simply has not the economies of scale that have driven a concentration of large players (the “primes”). Instead, the industry is highly dispersed—i.e., populated by firms that are generally quite small compared to the defense-equipment sector.

4. Capabilities/Activities Analysis

Our database contains 2,500 lines of data on the capabilities/activities of 395 PMFs. The comprehensiveness of this data varies by firm; but as a starting point, we believe it is a useful

approximation of what firms in the sector do. To help analyze the data, we began with the categorizations provided in the literature on the PM sector, i.e., Singer (2003) and Avant (2005).

A Starting Point: Singer’s Categorization of PMFs

One popular device that emerged from Singer’s (2003) book on the PM sector is the “tip of the spear” analysis. Singer used this tool to help explain the industry and then used case studies of particular firms in different places on the spear to illustrate the analysis in more depth. For instance, he posed EO (Executive Outcomes) as the quintessential “Military Provider Firm,” MPRI as an example in the “Military Consultant Firm” category, and KBR as an example of a “Military Support Firm.” See the figure below for a reproduction of Singer’s diagram:

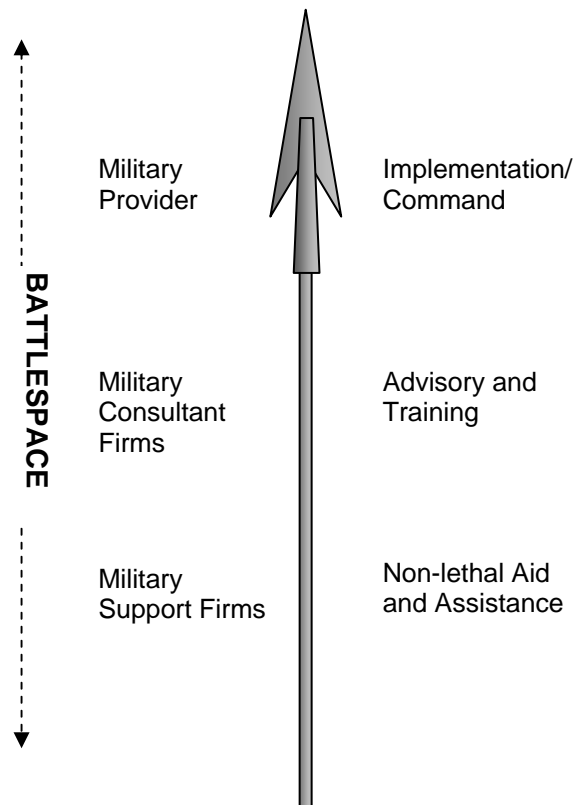


Figure 7. Singer’s “Tip of the Spear”
(Singer, 2003, p. 93)

Avant’s Refinements to Singer’s Categorization Scheme: Form Firms to Contracts

Deborah Avant (2005) proposed a slightly different approach to the analysis Singer provided. She found that it was difficult to classify individual firms using Singer’s typology because many firms are diversified, offering a variety of services that appear in different places on the spear (e.g., Blackwater does close protection, firearms training, has a parachuting training team and produces an armored vehicle, among its activities). Moreover, Avant found that firms move around the spear, offering different services to different buyers at different points in time. For these reasons, Avant proposed that *contracts* are a better tool for analyzing the sector. She categorized contracts according to five types, as follows:

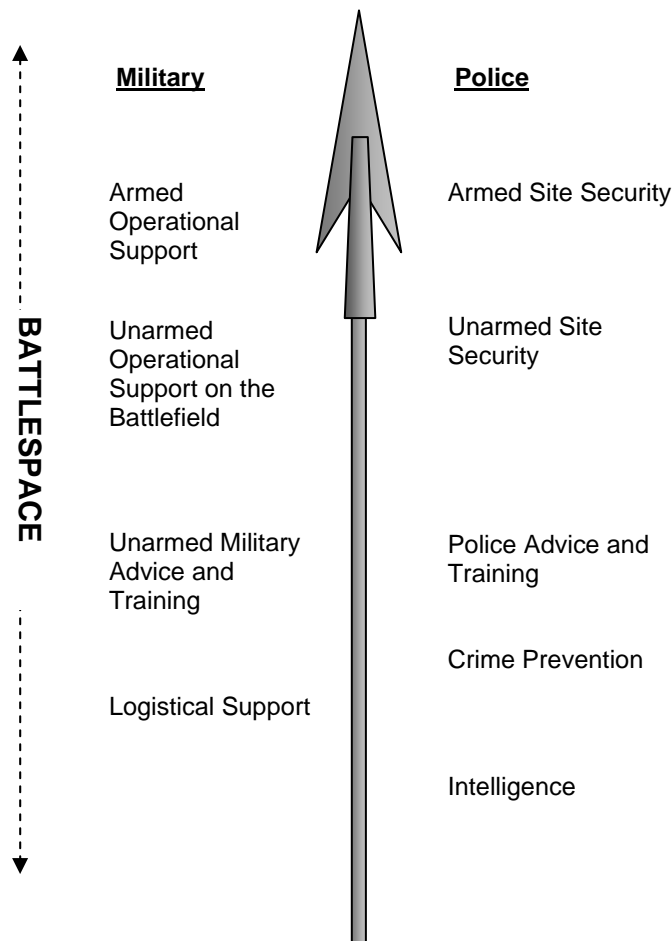


Figure 8. Avant's Analysis of the Spear
(Avant, 2005, p. 17)

A Further Revised “Tip of the Spear” Analysis: From Firms, to Contracts, to Capabilities

Singer's analysis focused on firms; Avant's analysis focused on contracts. In what follows, we offer an extension of these analyses that focuses on capabilities. This analysis is premised on the observation that firms are not only diversified and move around the spear, but that an analysis of what tasks firms *have been* performing over time does not capture firms' *potential* movement around the spear. There is an even broader scope of latent activity. One way to investigate this latent potential is to collect data on the capabilities firms claim they have. The following section focuses on these capability sets.

Capabilities are critical because underlying contracts (transactions in the marketplace) are firm-level capabilities. The concept of capabilities is widely used for analysis in the strategic management literature because it focuses on the building blocks for activities that are present in a firm (and, therefore, an industry sector). Firms distinguish themselves by their capabilities—firms are able to get contracts others cannot access because they can either do things other

firms cannot or can do them at a lower cost than their competitors can. Therefore, in strategic management, capabilities are often thought of as crucial underlying variables that explain the relative performance of firms (Barney, 1991; Teece, Pisano & Shuen, 1997).

Based on our attempts to cluster the approximately 2,500 individual capabilities in our data set, a rather different image of the “tip of the spear” emerged. By our analysis, the spear is much more heterogeneous than either Singer or Avant’s analysis suggests. The key result of our analysis of individual capabilities is that the PM sector is by no means unitary. In fact, it is made up of quite different sub-sectors, which are probably better thought of as a patchwork quilt than as elements up and down the spear. This is particularly true for the category “Military support firms,” which contains a smorgasbord of sub-sectors. These sub-sectors are essentially unrelated to one another in terms of the underlying capabilities they require to support contracts in any particular area. This means that the firms competing for contracts in these sub-sectors tend to come from very different industries (for instance, some services are “add-ons” provided by major defense contractors, while other services are provided by firms with capabilities that are largely undifferentiated from civilian/commercial skill sets, such as logistics or many IS/IT security activities). This led us to present a revised “tip of the spear” diagram, displayed in Figure 9 below (in the figure, the individual elements are not sized or ordered to represent the data, but merely to convey an overall image of the sector).



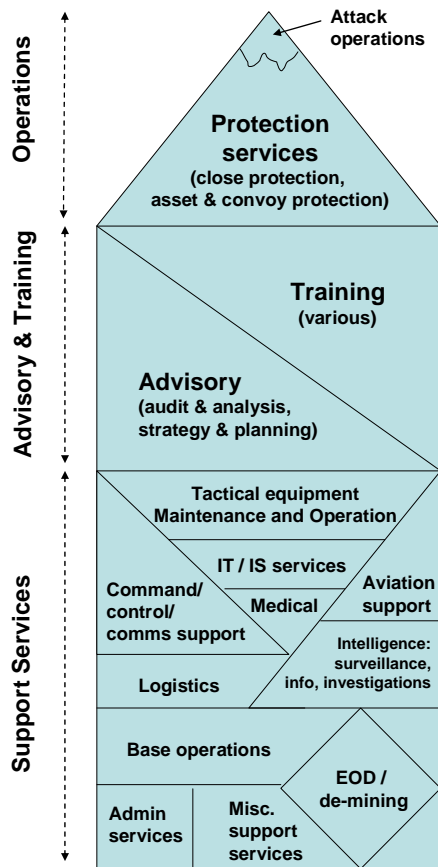


Figure 9. Revised “Tip of the Spear”

D. Capability Analysis

Our data suggests that approximately half of the firms in our sample of 395 are engaged in some kind of protective and security services; 75% do advisory and training work, and almost 90% are engaged in some kind of support services (variously defined). This data points clearly to the intermingling of service provisions up and down the spear that Avant and Singer (and others) have remarked on as a characteristic of the sector.

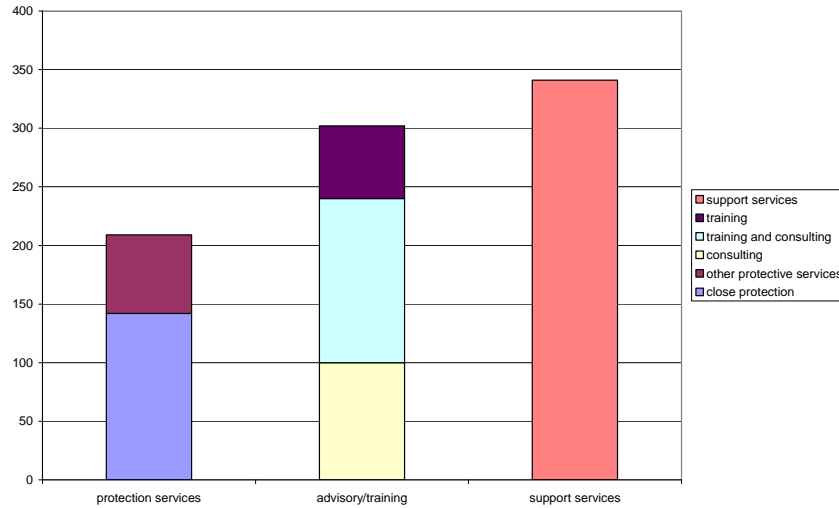


Figure 10. PMF Activity Summary
(number of active firms)

For the exact percentages, see the table below:

Table 2. Proportions of PMFs Active in PM Sub-sectors

	% of Firms Active (Sample 396)
Protection Services	53%
Advisory/Training	76%
Support Services	86%

Another way to display this data is as proportions of the spear—i.e., to examine the number of firms active in different sub-sectors of the PM sector:

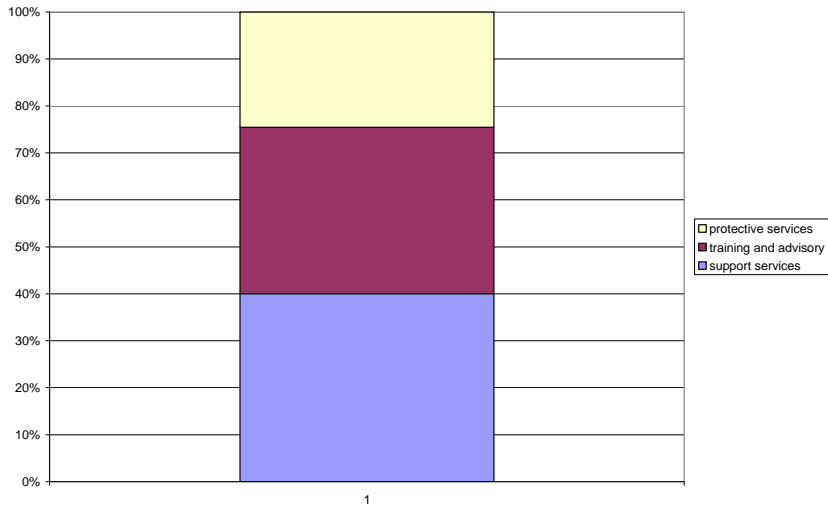


Figure 11. Number of PMFs Active in Different Sub-sectors

Viewed this way, about 25% of the different activities occurring in the sector can be classed as protective services, 35% as training and advisory, and 40% (almost half) as support services of various kinds.

Overall, we think this data will alarm some observers and satisfy others. Some people will be alarmed to find out that there are around 200 firms offering military competencies of various kinds for sale in the marketplace. From this perspective, it is rather worrisome that there is an industry that specializes in fielding various kinds of (private) mini-armies to the highest bidder. Others will find this fact reassuring rather than worrisome—for them, a significant number of firms means competition, which means efficiency.

Protective and Security Services

We conducted further analysis of the content of each PM sub-sector. Results for the protective services segment are provided in Figure 12 below.

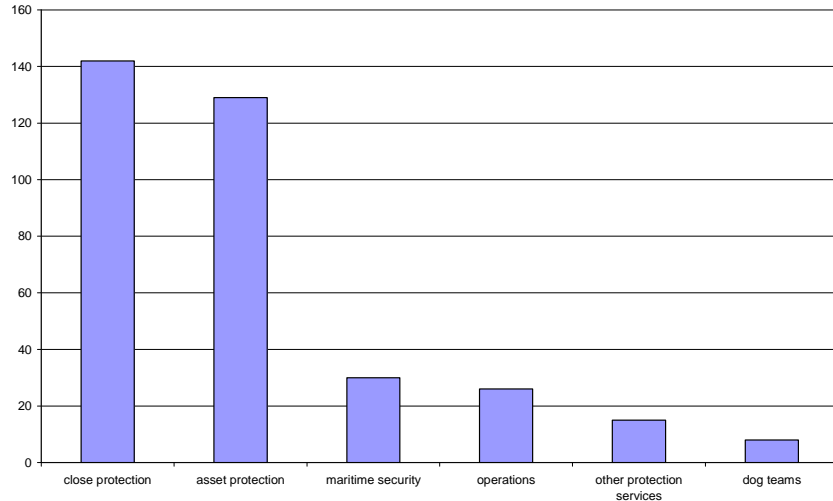


Figure 12. PMFs Engaged in Protective Services
(209 total)

This data indicates that about 2/3 of firms who are active in the provision of protective services are involved in close protection of individuals and assets, i.e., stationary guarding and convoy protection. When an individual thinks of private military and security contractors, this is probably what comes to mind. Our data indicates that this role, indeed, is the mainstay of the protective services business.

However, there are other protective services activities. About 30 firms are known to be active or capable of providing protective services for marine assets. A similar number of firms have capabilities for conducting a variety of operations. The kind of services mentioned here include assault capabilities, rapid reaction forces, and special operations units. A variety of miscellaneous services were also mentioned, as well as the provision of dog teams by a handful of firms.

Training and Advisory Services

Most firms that offer advisory (consulting) services also offer training services. There is considerable overlap between these services, as indicated in Figure 13:

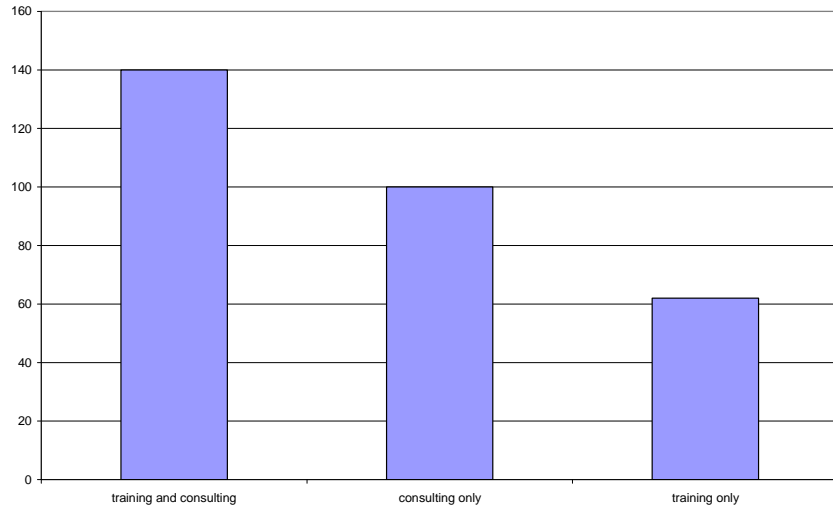


Figure 13. PMFs Engaged in Training and Advisory Activities
(240 firms)

There is a wide range of advisory/consulting services. Commonly mentioned advisory services are risk/threat analysis, counter terrorism and current tactics. However, we found that a very diverse range of advisory capabilities are offered in the marketplace. This suggests that—globally, at least—this sector is quite well-developed and comprehensive in its offerings.

The same is true for training; our data indicates a very diverse range of training services are offered by firms—options too numerous to list. According to our data, approximately 200 firms are active in the training market to some degree or another.

Support Services

Based on our earlier analysis displayed in Figure 9, it was apparent that diversity is also a hallmark of the support services offered in the PM sector. However, some services are more widely available than others, as indicated by Figure 14 below:

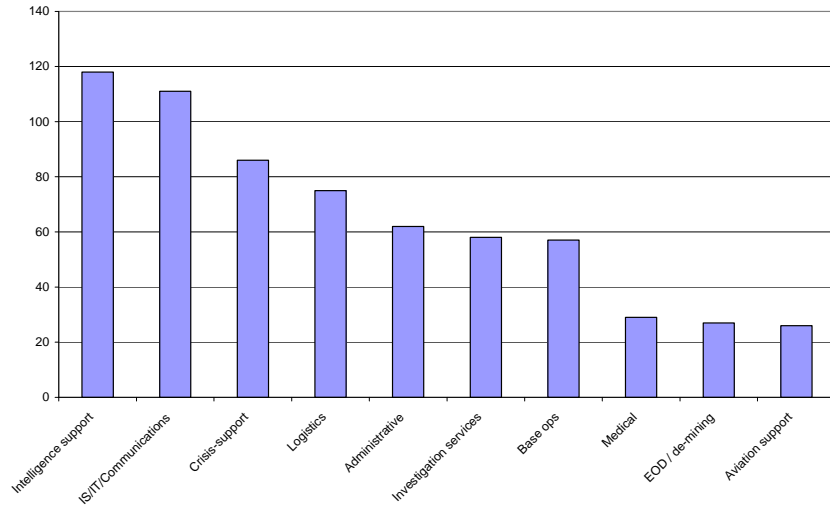


Figure 14. PMFs Offering Support Services
(data from 335 firms)

Two pieces of data seemingly jump out of Figure 14. First, consistent with Avant's analysis of contracts, intelligence support services are widely available in the sector. This category includes a range of services such as surveillance, intelligence analysis, various counter measures, and information gathering. The number of firms active in this service area indicates that significant competition exists. The second most available service is IS/IT/Communications. Again, the provision of these services appears to be highly competitive, with many firms offering a diverse range of activities in the marketplace.

Geographic Distribution of Capabilities: Do Different Geographies Have Different Capability Sets?

Are some geographies "tipper" than others? Do some geographies have a preponderance of consulting or support services? Based on our data, the following patterns emerged:

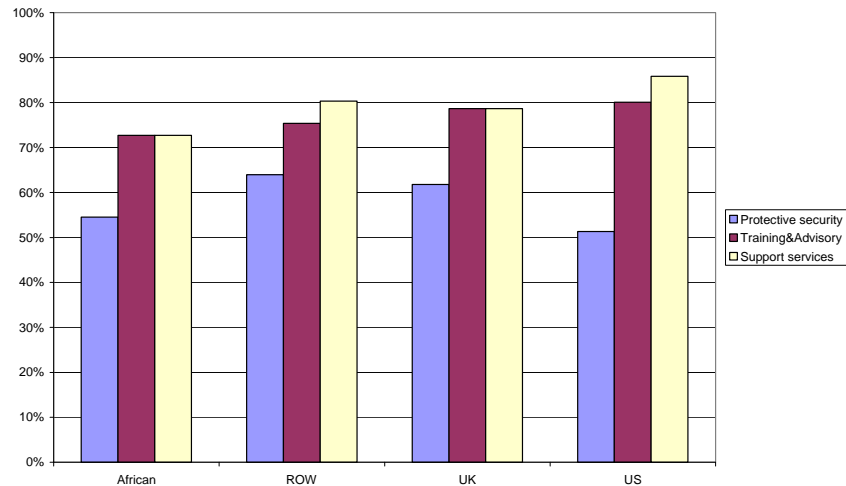


Figure 15. Regional Capabilities Distribution
(% of firms offering services in sub-sectors)

When examining this data, we must remember first that the chart shows percentages, not absolute numbers of each geographic region’s firms active in each capability. This distinction is important because approximately half the industry is based in the US, and this would otherwise distort the data.

The pattern that emerges from Figure 15 is that US firms are slightly more likely to be involved in support services and slightly less likely to be involved in protection services. However, overall, there is little difference between regions when the service mix is analyzed at this level. Of course, the service mix might show a geographic bias in narrower capability segments. We have not yet studied this data.

Two observations might be worth noting when we investigate the data on capabilities this way. First, a focus on this lower unit of analysis (i.e., a lower unit of analysis than whole firms) offers us the opportunity to examine clusters of capabilities (for instance, across different geographies) while temporarily ignoring firms. In principle, this might be a reasonable analytical strategy; it is well known that most firms recruit to fill contracts from databases on individuals, and that these individuals typically appear on the databases of more than one firm (Singer, 2003). Therefore, what might be important is the availability of these individuals and their capabilities to groups of firms, rather than what individual firms do. In other words, firms might merely be “shells” that hide underlying capability sets that are more important at the national and regional level than at the firm level.

Second, the overall similarity of the industry across geographic regions points somewhat to the international nature of the business. While there is significant variation in the specific offerings of individual firms, in general about 50% of firms offer protective services; this is true globally—regardless of a firm’s national origins. The geographic proportions hold steady for training/advisory services and support services.

Reprise: Defining and Bounding the PM Sector

Analysis of PMF capabilities invariably leads us back to the question of what, and who, belongs inside the sector (Ortiz, 2007b). In conducting our survey, we initially used a generous



definition of firms “active” within the PM sector in some form or another. But clearly, the definition of “sector” and “participant” is important here. Figure 16 summarizes the various ways we think the sector might be defined:

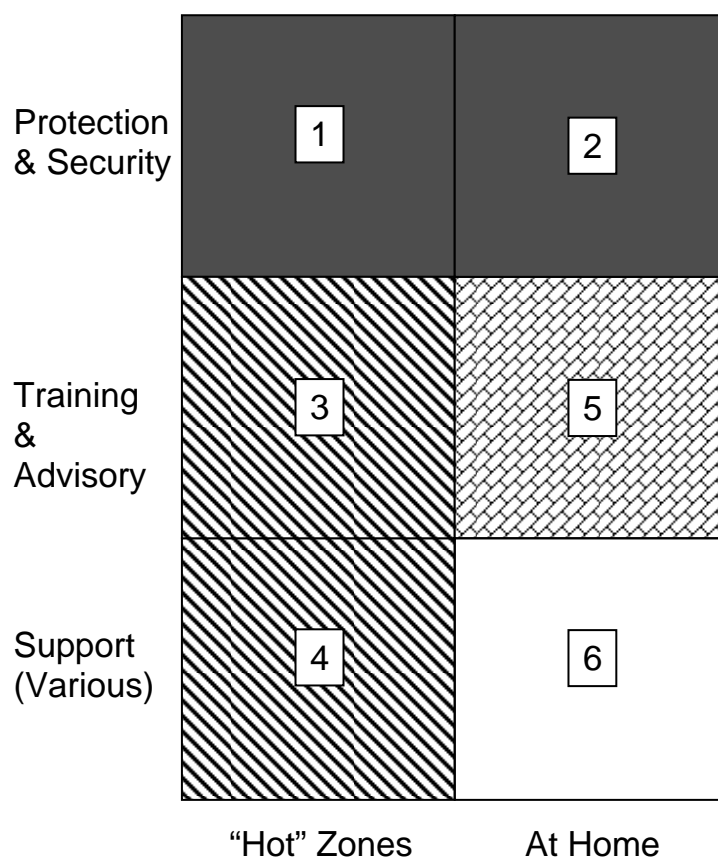


Figure 16. Defining the PM Sector

In this diagram, the vertical axis explains what activity is taking place. The activities are arrayed according to Singer’s “tip of the spear” heuristic. The horizontal axis illustrates where activities are occurring—either in hot zones (how hot, of course, varies) or at home (i.e., some other safe location).

The most restrictive definition of the “industry” would focus on Segments 1 and 2 in this figure. The 2006 IPOA survey used a somewhat restrictive definition of the sector—referring to firms engaged in armed security operations, which yielded a sample of 100 firms. In its report on PMFs, Human Rights First (2008, p. 1) used a similar definition, explaining that:

There is no universal, agreed definition of the term “private security contractor” [...] Human Rights First uses here an essentially functional definition of the term in light of the actual activities of such contractors fielded in Iraq and Afghanistan with a basic security mission—that is, a core mission to protect people (other than themselves) or things, to include guarding government (and contractors) facilities, protecting government personnel (and other government contractors) and United Nations (U.N.) and other international organization staff as well, and providing security for convoys.

Interestingly, in its 2007 follow-on report to that discussed above, the IPOA broadened its survey to include an identified sample of 334 firms. While we can't be completely sure of the Institute's criteria for inclusion in its sample, we suspect that it reflects Segments 1 and 2 in the diagram above, plus Segments 3 and 4, and possibly some firms in Segment 5.

The two problem zones (or "gray areas") in analyzing the PM sector are Segments 5 and 6. Some elements of Sector 5 fall more easily inside what we believe most analysts would agree as defining the PM sector. For instance, Blackwater's North Carolina training range, which includes various weapons ranges, is sometimes touted as the best in the world for some types of military training. Many aspects of MPRI's (Military Professional Resources, Inc.) advisement activities would also clearly fall in this segment. However, where should we classify activities such as Cubic's virtual training systems? Should we include firms such as Cubic in the PM sector, or exclude it? We think there are arguments on both sides.

Even more problematic is Segment 6 in the diagram. There are two issues here. First, we often cannot tell where the activities of support firms take place based on reports on the industry or on declarations by the firms themselves. Second, there is the question of whether the activities themselves belong inside the industry. IS/IT/communications firms are particularly troublesome in this regard. Let's examine, for example, CACI. It is a major provider of support services to the DoD and to the intelligence communities. Or, we could study Mantech. It builds and maintains databases that track potential terrorists and provides a range of other IT-related support services to the intelligence communities. If these services are largely performed at home, should we define them as inside the PM sector? And what about the services themselves—the things these firms do certainly appear to be a very different kind of business than that performed by DynCorp and ArmorGroup. They are involved in non-traditional types of "warfare." However, according to some arguments, if these types of activities reflect the way conflict is evolving into the future, firms like CACI and Mantech are—arguably—critical precursors of a new wave of private defense-sector firms. Should they be included in our sample of the PM sector, or left out?

It is important to note that in reporting on PM-sector demographics, there are legitimate rationales for using different definitions of the industry. We used an expansive definition of the industry; we included all the segments above.

To conclude, our analysis points out that the private military sector is by no means a unitary industry: it actually is an amalgam of several different elements that have independent drivers and are developing along different trajectories. In our analysis, the evolution of the supply side of the industry is, therefore, rather complex and dynamic. This complexity is partly driven by a set of demand drivers we believe to be richer and more diverse than is often acknowledged. In our analysis, the demand factors driving the long-term evolution of the industry involve the private sector, non-governmental organizations (NGOs), non-military government departments, and international organizations. Short-term demand factors are more military-related and involve co-opting a sector that has, in large part, traditionally served other customers. These factors are dynamically shaping the evolution of a heterogeneous and adaptive industry sector.



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