Managing uncertainty: lessons from Xenophon's retreat

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Abstract

Purpose – The article's purpose is to address complementary perspectives for managing uncertainty by looking at a historical example.

Design/methodology/approach – This is done using a case study of the experience of ancient Greek mercenaries that fought in and out of Persia over two years and approximately 2,000 miles.

Findings – An unexpected finding is that the size of an organization can be instrumental to its environment fit.

Research limitations/implications – An implication is that the application of existing models to the historical example suggests existing perspectives of change do not appear adequate individually in explaining or preparing organizations for change.

Practical implications – A wider implication of the study involves confirming the need for research and society to better understand the role of organization politics in outcomes.

Originality/value – The study uses a unique historical example to examine organizational responses to uncertainty that range between rational and haphazard explanations and it offers insights for management thought and practice today.

Keywords Organizational learning, Strategic change, Innovation, Uncertainty management, Management theory, Organizational change

Paper type Research paper

Introduction

Uncertainty is an intrinsic component of competition. The need for organizations to cope with or adapt to uncertainty represents an early focus of organizational research (e.g. Coase, 1937; Schumpeter, 1934; Thompson, 1967). The continuing relevance of managing uncertainty is evident in current business research and press discussing the increasingly dynamic circumstances organizations face today (e.g. D'Aveni *et al.*, 2010; Stanton, 2011). Competition among organizations in this environment is often described as "survival of the fittest" with continuous improvement becoming a minimum standard for remaining relevant (Tegarden *et al.*, 1999). Accordingly, there is a need for research to examine competing perspectives of organizational change (Graetz and Smith, 2010).

While the nature of competition evolves, lessons from history can provide insights for organizations today (Carmeli and Markman, 2011) and the reliability of learning can be increased by examining critical events (March *et al.*, 1991). The history of military exploits from ancient Greece provides one example of the impact of uncertainty on organizational survival. A specific circumstance that has been called

"one of the great adventures in human history" (Durant, 1939, pp. 460-461) is examined. It involves a Greek mercenary force that served with Cyrus, who contested with his brother Antaxerxes for the throne of the Persian Empire around 401 BC (Warner, 1949). Following the battle of Cunaxa where Cyrus was killed by the forces of his brother, the Greek mercenaries' gamble for riches died with their sponsor (Waterfield, 2006) and they ended up fighting their way both into and out of Persia (see Figure 1) over roughly two years and 2,000 miles (Lee, 2007).

The experience of the Greek mercenaries in Persia was recorded by Xenophon, a contemporary of the philosopher Socrates whom Xenophon consulted about joining the Persian expedition. Socrates advised Xenophon to consult the oracle at Delphi and later chastised Xenophon when he learned the question involved ensuring a safe return and not asking whether Xenophon should participate (Waterfield, 2006). Xenophon wrote multiple books that have survived and his ideas have had an enduring impact (Lee, 2007). For example, Alexander the Great was familiar with Xenophon's work and his invasion and subsequent conquering of Persia was potentially inspired by it (Hirsch, 1985). While the Greek population had a high awareness of conflicts with Persia, including the defeat of Persian invaders at Marathon, not much was known about Persia and Xenophon took advantage of the resulting curiosity to make Persia prominent in his many written works (Hirsch, 1985).

The remainder of the article is organized into four sections. First, relevant management theory is reviewed and propositions are developed for two different perspectives for managing uncertainty. The goal is to identify complementary aspects of the perspectives while evaluating their relevance for management research and practice. Second, the case method used in the current study is explained. Third, the case involving the Greek mercenaries is presented and analyzed. Finally, the paper concludes with a discussion of implications and opportunities for additional research.

Theory and propositions
Uncertainty drives the search for solutions (Tversky and Kahneman, 1992) and perspectives on approaching change range from the rational and logical to the more haphazard (Graetz and Smith, 2010). To improve the understanding of change, propositions are developed from two different perspectives. First, a rational perspective assumes organizations are purposeful and able to adapt (Graetz and Smith, 2010). Consistent with this perspective dynamic capability research has developed to explain organization responses to uncertainty (e.g. Eisenhardt and Martin, 2000; Teece, 2009). Second, a political perspective of organizations assumes that organizational change and adaptation requires effective political skills (Eisenhardt and Zbaracki, 1992; Ferris *et al.*, 2000; Pfeffer, 1992). According to this perspective, organizational politics play a larger role than management research generally attributes to it (Butcher and Clarke, 2003). In the following sections, dynamic capabilities and organizational politics literature are summarized and associated propositions developed.

Dynamic capabilities
An offshoot of resource based theory (Barney, 1991) dynamic capabilities explicitly recognizes that organizational resource profiles are not static (Kor and Mahoney, 2000). Dynamic capabilities seeks to explain the organizational processes that respond to both external events and internal pressures and enable adaptation to changing market
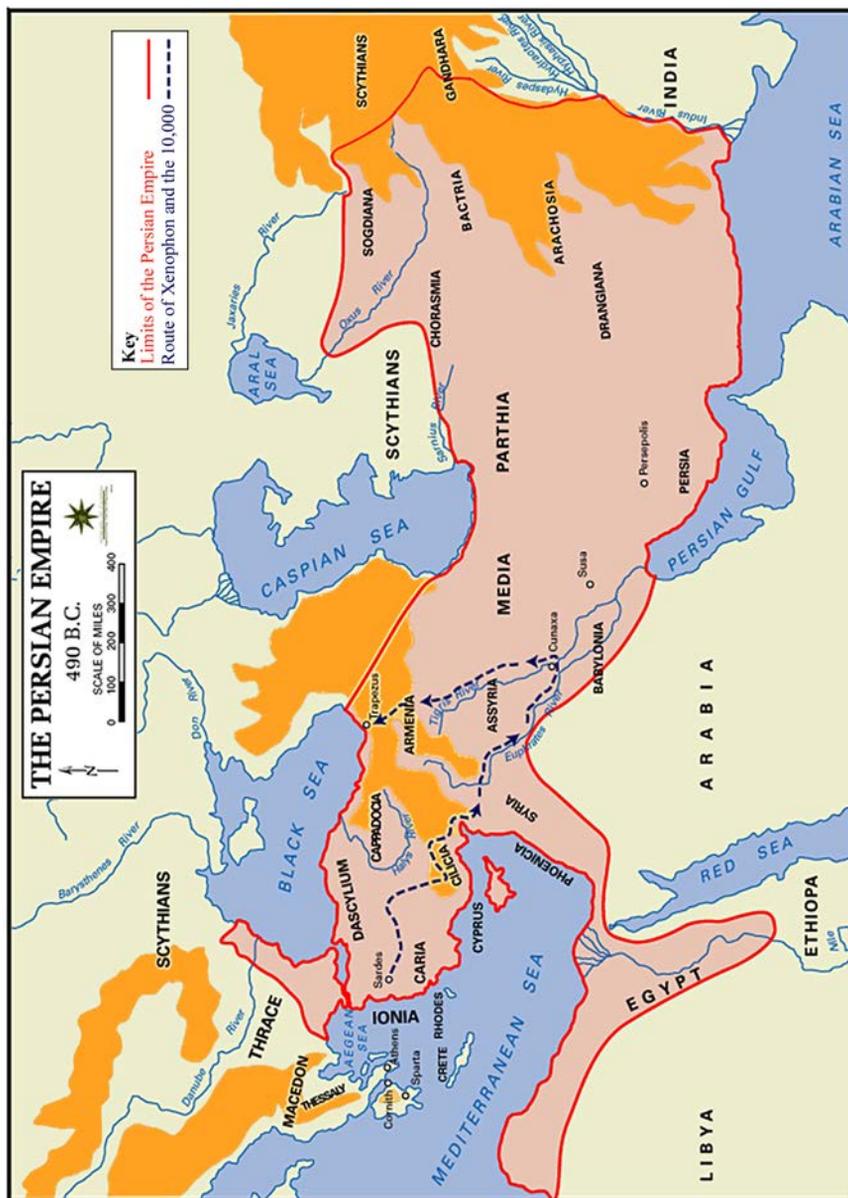
Figure 1.
Route of Xenophon and
the Greek mercenaries

conditions (Eisenhardt and Martin, 2000).While the role of dynamic capabilities is to transform organizational resources so they remain relevant (Ambrosini and Bowman, 2009), they stem from antecedent processes that alter an organization's resource base that becomes a valuable resource in its own right (Teece *et al.*, 1997). Capabilities involve shared meaning or tacit relationships that facilitate task accomplishment and they both enable and limit strategies available to organizations.

An example of how capabilities limit organizations relates to organizational inertia, or accumulated experience interfering with opportunity recognition (Hannan and Freeman, 1984). When change occurs, resulting uncertainty can increase an organization's risk through resource misallocation (Shane and Venkataraman, 2000) at a time when it can least be afforded. As a result, resource management needs to be carefully attended and aligned with an organization's external environment (Sirmon *et al.*, 2007). The extent of resource misallocation likely depends on whether associated change is evolutionary (competence enhancing) or revolutionary (competence destroying).

Evolutionary change reinforces existing paradigms, and provides organizations a way to improve performance with existing methods. Building on existing knowledge allows organizations to increase efficiency by achieving similar outputs with fewer inputs (Grewal and Slotegraaf, 2007), and associated learning can lead to greater competence and improved outcomes (Levitt and March, 1988). As a result, responses to evolutionary change reinforce efforts to more efficiently use existing resources. However, limiting the search for improvements to existing practices creates path dependency (Kogut and Zander, 1992) as the focus reinforces existing paradigms.

Revolutionary change meanwhile represents a greater challenge (Atuahene-Gima, 2005; Burgelman, 1983), because it is more likely to make current resources obsolete (Stieglitz and Heine, 2007). Further, existing resources likely limit an organization's ability to search for new solutions (Stuart and Podolny, 1996). The knowledge and skills needed following discontinuous change are different from prior processes, reducing the likelihood that needed changes will be found and adopted (Atuahene-Gima, 2005). A possible exception involves complementary resources, or interactions between new and familiar resources that often become critical for continued success when an organization's environment changes (King *et al.*, 2003). With revolutionary change, to the extent that existing resources can be combined in new resource interactions, successful adaption is more likely because it makes familiar resources more effective.

The implication of the proceeding discussion on different types of change is that resource endowments likely influence organizational responses to uncertainty. A paradox results where pursuit of evolutionary change is needed to remain competitive within an existing paradigm, but the path dependence of successful evolutionary development makes an organization more susceptible to revolutionary. Indeed, processes and resources contributing to organizational survival in stable environments may be detrimental in dynamic environments. Therefore, the following relationships are proposed:

P1a. When current conditions resemble the past, organizations focus on increasing the efficiency of using current resources.

P1b. When facing uncertain conditions, organizations attempt to develop complementary resources that improve the effectiveness of familiar resources.

Organizational politics
Politics relate to the observable, but often veiled, actions people use to enhance their influence or power (Eisenhardt and Zbaracki, 1992; Pfeffer, 1992). The predominant focus of research on organizational politics until recently has focused on its negatives, but politics can be essential in managing uncertainty and forming constructive responses to change (Ammeter *et al.*, 2002; Butcher and Clarke, 2003). While politics can create an internal focus at the expense of the external environment that drives change (Graetz and Smith, 2010), politics can help reduce fragmentation by providing a known arena for sharing and interpreting information (Zahra *et al.*, 1999). The ability to share information can be crucial during important decisions that generally require the involvement of more people (Pfeffer, 1992).

In times of rapid and unpredictable change, politics also injects randomness that may be critical to adaptation that avoids destroying the underlying organization (Brown and Eisenhardt, 1998; Pfeffer, 1992). Politics can diffuse power in an organization and allow networks to identify and apply underutilized resources to problems (Zahra *et al.*, 1999). While political activity can help to manage relationships (Butcher and Clarke, 2003), achieving positive outcomes requires political skill embodied by social awareness of effective arguments and communicating them well (Ferris *et al.*, 2000; Pfeffer, 1992).

In other words, political skill requires the use of influence to coordinate action. The Greek philosopher Aristotle outlined three facets of influence: ethos, pathos, and logos (Bizzell and Herzberg, 2001). While the elements are interrelated, ethos relates to a moral imperative and the credibility of the speaker, pathos appeals to an audience's sympathies to make an emotional connection, and logos relates to rational reasoning. We learn teamwork to coordinate activities and defer to authority in achieving common goals (Pfeffer, 1992), and along with a common goal trust is a crucial element for teamwork (Kotter, 1996). Influencing people to reach common goals leads to political behaviors, such as leading by example, promoting a vision, and arguing the value of organization (Ammeter *et al.*, 2002) – concepts directly related to management.

Managers serve as the basis for organizational growth and adaptation by identifying opportunities that an organization should pursue (Penrose, 1959) and managers need political skill in their pursuit of organizational goals (Butcher and Clarke, 2003; Pfeffer, 1992). Top managers are likely to be more skilled at political activity, but increased demands limit their ability to pay attention to every issue of importance (Garg *et al.*, 2003).While managers use scanning to identify threats and for responding to uncertainty (Helfat and Raubitschek, 2000), managers are rationally bounded (Eisenhardt and Zbaracki, 1992). For example, managers often limit search to information that supports their perspective (Pfeffer, 1992). Further, higher political skill likely relates to a heightened awareness of politics or a risk of focusing too much on internal issues. One implication of this risk involves top managers being less likely to develop and exploit new knowledge that originates outside an organization (Zahra *et al.*, 1999).

Compared with top managers, middle managers exhibit apparent advantages in responding to change. First, middle managers exhibit less lock-in to policies and procedures, and they typically display a greater flexibility toward fine tuning established processes (Sayles and Stewart, 1995). Next, middle managers are closer to

and are more likely to identify challenges facing an organization (Nohria and Berkley, 1994). Further, with their focus on different areas, middle managers inject divergent thinking into organizations (Floyd and Wooldridge, 1997). As a result, innovation comes primarily from middle managers (Kuratko and Goldsby, 2004) and drives a shift in power as influence is gained by managers coping with critical organizational problems (Pfeffer, 1992). The preceding logic suggests the ability of managers to effectively respond to uncertainty and change may depend on their level in an organization. Therefore, the following is proposed:

> *P2.* When faced with uncertainty, middle managers are more likely to recognize and act on divergent ideas than top management.

While politics helps in responding to change and getting things done, it comes with a price. Power and influence results from a person's reputation in getting things done, but the use of power to get things done can build animosity (Pfeffer, 1992). One reason is the use of power can be seductive to the point where power becomes its own goal (Simon, 1957), creating a distrust of the powerful. This may help explain attempts to use influence covertly. The covert use of power contributes to internal splits over the control of resources, such as information, that diffuses power (Pfeffer, 1992). The combined effect of these forces is that power is often transitory (Mitchell *et al.*, 1997). Therefore, the following is proposed:

> *P3.* The consistent exercise of power to enact change culminates in reduced influence.

Method
The research design involves a single-case study founded on theoretical propositions (Yin, 1994) to match patterns between a historical event and modern theoretical concepts (Campbell, 1975; March *et al.*, 1991). Managing uncertainty has long been regarded as an organizational challenge, and, while a single-case approach has limitations, its use is justified on three grounds. First, the challenges that Xenophon faced with the Greek mercenaries involved a unique circumstance of how a large organization responded to threats to its survival. Second, the dramatic circumstances of the Greek mercenary force in Persia contributed to a large body of information. Finally, it is neither appropriate nor practical to design a research study around similar circumstances (Zimbardo, 1973). The summary was developed from available documentation, including translations of Xenophon's memoir (Warner, 1949) on the experiences of the Greek mercenaries. Additional documentation that evaluates Xenophon's historical record and provides context for the mercenary force was also reviewed. An analysis of the developed case is then used to assess the research propositions with results summarized in Table I.

Case summary and analysis
Case summary
The setting is on the heels of the Peloponnesian War (431-404 BC) that resulted in a Spartan hegemony (404-371 BC) over the Greek city-states, including Athens (Jones, 2008). Following the Peloponnesian War, large numbers of unemployed mercenaries provided the foundation to build an army and Cyrus built his using Greek mercenaries

Proposition	Case highlights
P1a: When current conditions resemble the past, organizations focus on increasing the efficiency of using current resources	Plaison, or hollow square hoplite formation Creation of special unit of 600 hoplites
P1b: When facing uncertain conditions, organizations attempt to develop complementary resources that improve the effectiveness of familiar resources	Formation of slingers and use of lead shot Creation of cavalry from captured horses
P2: When faced with uncertainty, middle managers are more likely to recognize and act on divergent ideas than top management	Formation of council and promoting Xenophon to general Burning baggage and making night march Organization of cavalry and slingers from within hoplite force Implementation of a hollow square, or plaison, and special unit of 600 hoplites Switching signals for charge and retreat in river crossing Use of Karduchian arrows as javelins
P3: The consistent exercise of power to enact change culminates in reduced influence	Trial of Xenophon for hubris upon reaching Black Sea Splintering of mercenaries into three groups after reaching Black Sea

Table I.
Study propositions and
case support

as its core to contest his brother Antaxerxes for the Persian throne (Hutchinson, 2000). The summary of the surrounding events is presented in four segments beginning with the prelude leading to the battle of Cuxana that includes a discussion of the Greek commanders, because their fate plays a prominent role.

Prelude. Cyrus joined roughly 10,400 Greek hoplites[1] and 2,500 peltasts[2] from different units and commanders (Lee, 2007; Waterfield, 2006) with his larger force of Persian soldiers commanded by Ariaeus (Warner, 1949). A Greek general's status depended on the number of men they led, and command of Cyrus's Greek forces was initially given to Xenias who led 4,000 mostly Arcadian hoplites that were already in Ionia (see Figure 1) with Cyrus as garrison troops policing urban centers (Lee, 2007). The remainder of the Greek force was spread across three groups and five generals. First, Proxenus, Socrates (not philosopher), and Sophaenetus commanded an additional 3,000 hoplites recruited from across Greece, and it was Proxenus that recruited Xenophon (Waterfield, 2006). Second, Clearchus, a Spartan, commanded a mixed force of 1,000 hoplites, 800 peltasts, 200 archers and 40 cavalry (Lee, 2007). Third, Menon led 1,000 hoplites and 500 peltasts from a force of 2,000 hoplites Cyrus had loaned to Aristippus for use in Thessalia (Lee, 2007). After the majority of Xenias's men defected to Clearchus, Xenias deserted Cyrus and Clearchus became the leading Greek general (Waterfield, 2006). Additional reinforcements brought the Greek force to its culminating size as they marched into the interior of Persia with the understanding they were defending Cyrus from a rival satrap, Tissaphernes (Warner, 1949).

The Greek leaders contributed to a sense of disorder with animosity serving as a dominant feature of their relationship. Clearchus, the ablest of the Greek commanders (Hirsch, 1985), had been banished and sentenced to death by Sparta after he fought a Spartan force sent to retrieve him for abuses in Byzantine (Lee, 2007; Waterfield, 2006).

Clearchus was also the only Greek general who likely knew that Cyrus intended to overthrow his brother and that his aims were not simply to protect his satrap from Tissaphernes (Hirsch, 1985; Warner, 1949). While less colorful and experienced, the other Greek generals likely came from circumstances offering limited options. The only other experienced Greek commander was Menon, a clear rival to Clearchus. On the march to Cuxana, Proxenus had to interpose his army between the armies of Clearchus and Menon to keep them from coming to blows, after Clearchus struck one of a Menon's soldiers and another then threw an axe at Clearchus (Lee, 2007; Waterfield, 2006). With this background, it is little wonder there were problems maintaining control of the larger mercenary force.

Problems became evident early as the mercenaries went on strike for twenty days when they suspected Cyrus intended to use the army for more than protecting his satrap from Tissaphernes (Warner, 1949). The further the mercenaries marched into Persia, the clearer Cyrus's true intentions must have become. The strike came to an end after Clearchus gave a speech where he wept in front of his troops saying he would never betray fellow Greeks for the friendship of barbarians (Hirsch, 1985; Lee, 2007). At the same time, Clearchus assured Cyrus he would get things under control and Cyrus rewarded him for getting the mercenaries moving again (Lee, 2007). From this, one can conclude the Greek mercenaries were deceived by both their employer and leadership.

Other factors contributing to problems with discipline resulted from the nature of the mercenary force itself. First, the Greeks believed in social mobility or a shared belief that anyone could become general, contributing to a sense of individualism (Hutchinson, 2000). This is consistent with developing Greek democratic ideals and the formation of armies from voting citizens that was further compounded by the mercenaries being volunteers. Second, the mercenary force had both a formal and informal structure. Lochos, the formal structure, created military units with selected leaders (Lee, 2007). Overall, the Greek's command structure enabled initiative by identifying and developing capable leaders (Hutchinson, 2000). Meanwhile, informal groups called suskenia shared resources and worked to provide necessities (Lee, 2007). The concept of logistics was not integrated into Greek armies and gave generals less control over foraging, or how troops met basic needs (Lee, 2007). Still, the march into Persia gave the disparate Greek mercenary groups crucial experiences in coordinating activities, such as marching, making camp, and setting sentries.

Battle of Cunaxa. Antaxerxes was aware of Cyrus's army and made plans to meet him with an even larger one. Six months after the Greek mercenaries left Ionia came the pivotal battle at Cunaxa near present day Fallujah, Iraq (Lee, 2007). One of Cyrus's cavalry officers, Pategyas, spotted the opposing army during a midday march that included crossing a defensive trench that contributed to disarray in Cyrus's army (Warner, 1949). With his brother's army near, Cyrus ordered his army to deploy for battle in a process that took considerable time (Lee, 2007). The Greeks deployed on the right of the Cyrus's army putting their unshielded right side along the Euphrates River (Hutchinson, 2000).

Both armies waited to attack until late afternoon, when the Greek force charged and the Persians opposite them retreated. Meanwhile, the ensuing fight between the opposing Persian forces was more difficult with Antaxerxes' larger army overlapping the army of Cyrus (Hutchinson, 2000). Cyrus focused on attacking his brother's bodyguard creating disorder and allowing Cyrus to wound Antaxerxes before being

killed himself (Warner, 1949). Not aware of Cyrus's death, the Greek force advanced on Antaxerxes' remaining forces sending them into retreat. At the conclusion of the day, both sides felt they had won. The Greeks held the field and suffered few casualties, but the Persian cavalry had pillaged the Greek's camp destroying their supplies (Hutchinson, 2000). The interim result was an uneasy truce.

After the battle, the Greek mercenaries learned of Cyrus's death and attempted to retrieve success from failure by offering to make Ariaeus the king. However, he refused and Ariaeus ultimately returned to serve Antaxerxes (Waterfield, 2006). The mercenaries then approached Tissaphernes, the initial focus of the campaign and the general that Antaxerxes left in charge of dealing with the Greek force. However, he also refused and, in turn, the Greeks refused to surrender to Tissaphernes (Waterfield, 2006). Ariaeus, whether giving good advice or acting in the interests of Antaxerxes, convinced the Greeks to move north, using the argument that they had stripped the country bare of supplies on their inward march with Cyrus (Lee, 2007).

Now the more mundane implications of Cyrus's absence became clear, as the Greeks had depended on Cyrus for planning their route and making supplies available (Lee, 2007). The Persians initially guided and made supplies available to the Greeks, but that ended in treachery when Tissaphernes played on the rivalry between Clearchus and Menon (Hirsch, 1985) to capture the Greek generals, and kill the 20 captains and 200 hoplites that accompanied them to a dinner (Hutchinson, 2000). Only one hoplite, Nicarchus returned to warn the Greek mercenaries of the incident – dying as he held his bowels in his hands (Warner, 1949). The Greek's initial reaction to this shock was to band together (Lee, 2007). A subsequent council endorsed Xenophon as a leader and the decision to go north into the uncharted territory of the Karduchian mountains with the logic that it was easier to cross the Euphrates at its source (Waterfield, 2006).

The retreat. The decision to go north bonded the Greek mercenaries together with the common goal of survival and returning home (Waterfield, 2006). However, the mercenaries adjusted their tactics and invested to improve their capabilities as a military force. First, the Greek mercenaries improvised their traditional phalanx formation to form a hollow square that surrounded their baggage train and camp followers with hoplites (Warner, 1949). The implementation of a hollow square, or plaison, drove other important changes. To enable forming a hollow square with equal sides, the Greek mercenaries were redistributed to other units and this helped to make ethnic divisions less distinct (Lee, 2007). Next, the attacks from the rear resulted in the creation of a special unit of 600 hoplites to maintain the integrity of the formation as the force naturally spread out and contracted moving over rough terrain (Lee, 2007).

Hollow square formations had been previously used by both Sparta and Athens with mixed success (Lee, 2007) and this change alone did not offer protection from Persian archers and slings. Hoplites carried shields carried on their left, so soldiers on the right and rear of the formation were most vulnerable. Consequently, they became the focus of attack and initially a Persian force of only 600 soldiers was able to slow the movement of the 10,000 Greek mercenaries to only a few miles a day (Lee, 2007). The Persian light troops were able to engage the Greeks from long range and then disperse before they could be engaged in close combat. To counter continued Persian harassment, the Greeks implemented additional changes.

Coinciding with a decision to burn their wagons, tents, and other baggage, the Greek mercenaries made a night march giving them a two-day respite from Persian

harassment (Lee, 2007). Less baggage enabled faster movement and a smaller more defensible camp, but it alone was not sufficient to protect from Persian attack. Therefore, the mercenaries formed 200 slingers and 50 cavalry soldiers from the best of the captured horses (Lee, 2007). Slingers were considered less prestigious than hoplites, so a bonus was used to induce soldiers to volunteer as slingers (Warner, 1949). The Greeks also used captured lead with their slings giving them a greater effective range compared to the stones used by the Persians (Waterfield, 2006), though the Greek mercenaries later ran out of lead and resorted to using stones (Lee, 2007). These changes allowed the Greek mercenaries to reach the Karducian mountains.

As the mercenary force entered the Karduchian mountains, the Persian army stopped its pursuit because it accomplished the goal of getting the Greeks out of Persia. Additionally, few of the Greeks were expected to survive, as no one had returned from a force of 120,000 Persian soldiers that had recently been sent into Karduchia (Warner, 1949). Consequently, the going did not become easier and the Greek mercenaries continued to be harassed by hostile forces. The rough terrain provided its own challenges and on the second day in the mountains the generals removed excess animals and camp followers as the mercenaries went through a narrow pass (Lee, 2007). The smaller army was an attempt to further increase mobility and reduce the supplies needed to support it. Still, harassment and the constant need to search for supplies combined to keep the Greek mercenaries moving (Lee, 2007).

In continuing to move north, the Greek mercenaries faced new challenges. For one, they had no maps. The Greek mercenaries depended on scouts and hostages that limited knowledge of their march to only a couple of days (Lee, 2007). At one point, when faced by a mountain pass guarded by hostile forces, two prisoners were questioned about another route (Warner, 1949). When the first repeatedly denied any alternative, his throat was cut in front of the other, and the remaining prisoner provided the Greeks with another route through the mountains (Waterfield, 2006). Constant attacks threatened to separate the Greek force as they stretched out along mountain trails and river crossings. This led to innovative responses to attacks, including hiding behind trees when boulders were rolled downhill by defenders and maintaining forces on parallel high ground (Lee, 2007). Another creative tactic the Greek mercenaries used was switching the signals for charge and retreat to successfully complete a contested river crossing (Warner, 1949). A smaller Greek force covering the river crossing was threatened with being cutoff until the signal to charge held the enemy force in place long enough for the last of the mercenaries to finish crossing the river. Still, Greek losses the first few weeks in the mountains were comparable to the months they spent in Persia (Waterfield, 2006). The Greek mercenaries also missed the opportunity to adapt Karduchian long bows, whose arrows could pierce both Greek shields and armor, threatening hoplite usefulness, as peltasts simply used the recovered oversized arrows as javelins (Hutchinson, 2000). Again, adaptations helped the mercenary force move through the mountains.

The sea, the sea. The Greek mercenaries celebrated seeing the Black Sea with shouts of "the sea, the sea" that caused successive ranks to rush forward thinking initially they were under attack (Waterfield, 2006). Sighting the Black Sea offered the Greek mercenaries a false promise of the familiar and resulted in the return of internal dissension. In one instance, Coeratades briefly assumed command of the Greek mercenaries by promising provisions, but he was unmasked as a fraud when the

provisions proved inadequate (Hirsch, 1985). In another case, the latent frustration of the mercenaries turned on Xenophon and he was tried for hubris – a serious charge in ancient Greece (Waterfield, 2006). Xenophon's accuser was a mule driver whom Xenophon struck during the march through the Karduchian mountains. Xenophon defended himself by playing on the sympathies of the army for having left so many behind. Xenophon explained that he struck the mule driver after he had ordered him to carry a wounded soldier and that he later found the mule driver burying the soldier alive (Warner, 1949). The mule driver's rebuttal was that the wounded soldier still died to which Xenophon replied "we're all going to die, but does that mean we have to be buried alive?" (Warner, 1949, p. 131). Xenophon successfully refuted the charge, but that his behavior was questioned showed to all his actions were only condoned by the emergency of their circumstances and the emergency had passed.

As a result of the dissent, the remaining 8,200 Greek mercenaries splintered into three groups (Warner, 1949). However, the smaller mercenary groups were more easily attacked and resulted in 1,000 Greek casualties in a single week (Waterfield, 2006). The harried Greek mercenaries increasingly relied on superstition and ritual sacrifice to divine a way forward as they confronted the familiar and unfamiliar together. Even when the mercenaries came upon Greek settlements their reputation preceded them and the mercenaries were often denied assistance and barred from the settlements. Not only were the Greek outposts along the Black Sea not Greece, but the mercenaries themselves were changed from their experience. Constant and varied battle had honed the mercenaries' skills making them a versatile, battle-hardened force (Lee, 2007). Since they had learned how to survive as soldiers, the journey of the Greek mercenaries ended similar to how it began. In the spring of 399 BC, Spartan emissaries hired the 5,000 remaining mercenaries under Xenophon and they returned to Ionia to fight Antaxerxes (Lee, 2007).

Case analysis
The response of the newly selected Greek generals to immediate and subsequent challenges consistently involved bricolage, or using available resources to find workable solutions (Nohria and Berkley, 1994). For example, cavalry was created from captured horses, slingers were recruited and outfitted with lead shot, the mercenaries reduced their baggage and camp followers at the start of their retreat and upon entering the Karduchian mountains, a special unit of hoplites was formed to enable the hollow square formation, and so on. In each case, these innovations pulled on ideas the Greeks were already familiar with and resources on hand. For example, Xenophon had cavalry experience (Hutchinson, 2000), and Sparta and Athens previously used hollow square formations. Further, these changes largely focused on increasing the effectiveness of the core force of hoplites. Again, constant battle over two years honed the Greek mercenaries into a formidable force with experience fighting different units in varied terrain. However, the Greek mercenaries failed to incorporate Karduchian longbows that offered the potential to make the hoplite obsolete and simply used recovered arrows as javelins – a familiar application. These events largely support organizations trying to increase efficiency of current and familiar resources with developed propositions (*P1a* and *P1b*). Still, it leaves open the question of whether organizations can successfully deal with revolutionary change. Clearly, organizations need to develop processes to improve their capabilities while being mindful of how the same may also restrict them.

In organizational research, what is known to have happened is often less intriguing than the question: What might have been? This is less true with the dramatic changes in the circumstances of the Greek mercenaries and we have their remarkable story because they survived. Still, one interesting question is whether the Greek mercenary force would have survived if Tissaphernes had not killed their generals. The treachery by Tissaphernes was aided by the rivalry between Clearchus and Menon that likely blinded them to the external threat of the Persians they defeated on the battlefield. Nicarchus's name survives largely due to the dramatic nature of his delivering the news of the Persian treachery as his life literally slipped through his hands. If there was doubt about the mercenaries' fate, it disappeared with the evidence of Nicarchus. However, the treachery also made the Greek organization less hierarchal, or flatter—an outcome with advantages in responding to change (Schumpeter, 1934) and clarified their immediate concerns. While the initial generals did not have the chance to see whether they could effectively adapt, it clearly shows that others within the mercenary force could. As such, the experience of the Greeks suggests an under-appreciated role of management development as an aid in responding to uncertainty. Taken together the events largely support the proposition (P2) that middle managers are more likely to respond to uncertainty with needed innovations than top managers. The subsequent survival of the mercenary force resulted from the multiple innovations that were initiated by the survivors of the leadership purge that resulted from nearsightedness exhibited by the same leaders[3].

Once the immediate threat of survival passed, coordinated action dissolved and suppressed divisions resurfaced. Upon reaching the Black Sea, Xenophon was associated with unpopular decisions, such as reducing the number of camp followers in Karduchia. The mercenaries were unsatisfied with their situation and Xenophon was a ready scapegoat[4]. Although Xenophon successfully defended himself, the mercenaries still separated into three groups with lower survival rates. While Xenophon retained leadership of one of the groups and led a 5,000 hoplite force recruited by Sparta to fight Antaxerxes again, it is unlikely that Xenophon ever held the same level of authority as he did during the retreat. The mercenaries appeared aware of the adage that power corrupts and took action to put Xenophon on notice. As such, it appears exercising power reduces its usefulness and creates divisions, supporting the final proposition (P3).

Conclusion

Although the increased pace of environmental change is widely touted, modern advances have significantly reduced the range of uncertainty that organizations face. For example, financial markets, maps and navigation, communication, and transportation infrastructure are largely taken for granted today. Further, modern organizations rarely face true questions of survival as bankrupt organizations are often acquired and integrated into surviving organizations. With this perspective, the Greek mercenaries and their response to uncertainty offer multiple lessons for management research and practice.

Implications
Management research. Having survived their experience the Greek mercenaries returned with different perspectives and to altered circumstances. However, the attributes that made them valuable to Cyrus remained and they were recruited by

Sparta in a similar task. This suggests that both environments and organizations change, but core organizational capabilities can remain valuable. The availability of organizational resources and capabilities has been recognized as important and increasingly focuses on creating value from combining resources (Barney, 1997; Sirmon *et al.*, 2007). Further, resilient organizations need to know how to make use of available resource combinations (Carmeli and Markman, 2011). Achieving long-term success requires organizations capable of constant adaptation, but existing perspectives of change do not appear adequate individually in explaining or preparing organizations for change. Additional research is needed to explain how resources are developed and effectively used together in changing environments.

Another implication for research from the current study is confirming the need to better understand the role of organization politics (Vaara, 2003), as understanding organizations requires paying attention to politics (Sayles and Stewart, 1995). Politics can add an element of randomness that can improve an organization's ability to adapt (Brown and Eisenhardt, 1998), suggesting an opportunity to find ways to use politics effectively and productively. Constructive politics is generally considered a contradiction, but elements of constructive politics include understanding tactics, considering motives, and an awareness of stakeholders and the environment (Butcher and Clarke, 2003). Meanwhile, related theory and prescriptions for productive uses of organizational politics remain largely undeveloped. Simply ignoring politics or the use of power and influence misses the opportunity to understand and train people to develop these skills. The need to understand the effective use of power and influence is more acute when one accepts it may serve as the secret of success for individuals and organizations in adapting to change (Pfeffer, 1992).

Management practice. While the propositions and case do not reflect favorably on the Greek leadership, the example reinforces that top management has a long-term influence on the success of organizations. This is because top management sets the strategic context of organizations (Burgelman, 1983) and the military structure and culture of individuality of the Greek's provided the foundation for adaptation. The study also demonstrates the importance of developing an awareness of politics and associated tools, such as stakeholder management (Mitchell *et al.*, 1997).

Two other practical implications relate to more fundamental concerns. First, the initial treachery by Tissaphernes likely assumed centralized control or that taking out the Greek's leaders would end the mercenaries' resistance. Similar "mirror imaging" assumptions that other cultures will respond as expected did not work then and are unlikely to work today. Second, the case echoes continuing concerns on business ethics. A telling example related to the case is that the double-crossing caught up with Tissaphernes and, while preparing for a bath, he was killed for disloyalty by Ariaeus on orders from Antaxerxes (Waterfield, 2006). While skill alone may be insufficient to assure success, a lack of integrity can ruin even the most promising career.

A final implication for managers is the need to constantly evaluate their organizations size and scope. The Greek mercenary force divested its baggage at least twice to become more nimble and able to survive. The Greek force of 10,000 was also able to stay together and survive Karduchia, when a larger Persian force of 120,000 that preceded them did not. Still, when they broke into three segments after reaching the Black Sea, the mercenaries experienced some of their heaviest casualties. This suggests that the size of an organization can be instrumental to its environment fit. Further, the mercenaries' survival was enhanced by diversifying from a hoplite force to

a mixed force with cavalry and slingers. This suggests that uncertainty can be partially compensated for using diversification (Van de Ven, 1986). Further, as managers gain experience with restructuring they should make better decisions (Barkema and Schijven, 2008). An important skill since it is unlikely that an optimal match of organizational size and activity can be maintained as circumstances evolve.

Limitations and future research

Research generally exhibits shortcomings that limit its influence, and often these limitations represent opportunities for additional research. This study is no exception. The primary limitation of the current study is the use of small samples (here a single case) can be flawed, but it is difficult to match the power of real events (March *et al.*, 1991). The choice of a critical event from antiquity was deliberate in that the juxtaposition of modern and ancient challenges helps to put modern challenges into perspective. However, this goal also represents a potential bias in that in summarizing existing change research and building a case that has been examined by multiple books into a few pages opens the possibility of misinterpretation. Still, the selection of a single case can facilitate inductive insights to better understand the phenomenon of interest (Carmeli and Markman, 2011; Yin, 1994). While the Greeks were not aware of modern management theories, propositions framed in current research can gain meaning through comparison to actual circumstances. The circumstances of the Greek mercenaries are unique and unlikely to be repeated and offer insight to organizational threats in areas where the development of theoretical frameworks remains limited.

The need for continued research on organizational change frameworks, development and use of resources, and politics has already been identified. One research opportunity not mentioned is the need to explore incumbent organizations that face revolutionary change to outline means for adaptation. Another opportunity relates to the impact of managerial ethics. The fate of Cyrus and Clearchus may provide a morality tale on managerial integrity; however, they may also have simply told the mercenaries what they wanted to hear. It is possible that deception (like politics) has a role in organizational strategy, and exploring appropriate uses of deception by managers and organizations represents an opportunity for research. In closing, a commonly accepted management precept is that organizations must change and adapt, but an understanding of how to achieve this remains elusive.

Notes

1. Hoplites were heavy infantry that fought in a phalanx formation of overlapping shields that presented a wall of bristling spears, and were formed from middle class, Greek citizens able to afford the needed equipment.

2. Peltasts were light infantry that had lower status and fought as skirmishers armed with a wicker shield and javelins.

3. While the exact source of several innovations is unknown, the formation of cavalry can be attributed to Xenophon as he had cavalry experience in Athens. Further, Xenophon, prior to the killing of Greek leadership by Tissaphernes, did not hold a leadership position.

4. While information depends on Xenophon's reporting, his account appears balanced and hew seems to have been crucial in developing innovative responses to the challenges the Greek mercenaries faced.

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