

**LEARNING FROM HETEROGENEOUS EXPERIENCE: THE
INTERNATIONALIZATION OF ENTREPRENEURIAL FIRMS**

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ABSTRACT

While much research suggests that organizational processes are learned from experience, surprisingly little is known about the content of what is learned and how that content is developed. Using an inductive research logic and in-depth nested case studies, we explore how organizations learn key processes from heterogeneous experience. Specifically, we study how organizations learn to internationalize. The setting is six entrepreneurial firms with headquarters in three culturally distinct countries (i.e., Finland, United States, Singapore). We show that learning a key process originates with cognitive templates that leaders use to seed initial experience, not with pure experiential learning as much research suggests. Learning further progresses as leaders develop more understanding not just about *how* to accomplish a process, but *when and where* to accomplish it. Finally, learning continues as managers mindfully shift the levels of abstraction in heuristics for processes through experience rather than mindlessly repeat the same ones over time. At a broad level, we describe how learning a strategically significant process involves becoming expert, not becoming routine. Together these findings provide a more relevant and accurate view of organizational learning than what exists in the extant literature.

Key words: learning, process, internationalization, entrepreneurship

Much research suggests that organizational processes are learned from experience. Many studies, for example, show that as organizations gain experience in the production of automobiles (Levin, 2000), airplanes (Alchian, 1963), trucks (Epple, Argote, & Devadas, 1991), and ships (Rapping, 1965) unit costs typically decrease. Beyond manufacturing, research using a wide variety of alternative processes such as pizza production (Darr, Argote, & Epple, 1995), surgical procedures (Pisano, Bohmer, & Edmondson, 2001), semiconductor production (Chung, 2001; Gruber, 1994), alliances (Anand & Khanna, 2000), and acquisitions (Haleblian & Finkelstein, 1999) also describe how processes significantly improve as organizations gain experience.

A striking feature of the research on organizational experience, however, is that it fails to address the content of what is learned and how that content is developed. Instead, learning is *inferred* based on performance outcomes such as productivity (Epple, Argote, & Devadas, 1991), quality (Levin, 2000), reliability (Haunschild & Sullivan, 2002), and profitability (Haleblian & Finkelstein, 1999; Hayward, 2002). Many learning curve studies, for example, use historical manufacturing input data on labor and capital along with comparable data on cumulative output. If the coefficient on the cumulative output variable is significant, learning is said to have taken place. Stated differently, performance has been altered as a result of experience. When the coefficient on the cumulative output variable is positive, experience leads to increased performance implying that organizational learning is adaptive (Argote, 1999 p.17) Alternatively, when the coefficient on the cumulative output variable is negative, performance has decreased, implying that learning is maladaptive.

In efforts to address the drawbacks associated with measuring learning as a function of accumulated experience, some scholars employ antecedent-behavior-consequence models (e.g., Haleblan & Finkelstein, 1999). While an improvement, use of these models for gauging learning also present challenges. Instead of understanding how or what learning takes place, inferences are made based primarily on examination of antecedents and their consequences. First, an antecedent condition is measured, such as the similarity of a focal acquisition to those completed in the past (e.g., measured by SIC codes) (Haleblan & Finkelstein, 1999; Hayward, 2002). Next, the performance consequences of the focal acquisition are assessed. After combining assessments of both antecedents and consequences, inferences are then made regarding the behavior (i.e., learning) that might have occurred. But, what is overlooked in this type of learning model is an understanding of how and what behavior actually did occur (Anand & Khanna, 2000; Hayward, 2002; Zollo, Reuer, & Singh, 2002). Therefore, like the learning curve literature, learning is seen as a function of accumulated experience, measured by the number of acquisitions or alliances, and/or of similarity, assessed by measures like four-digit SIC code relatedness.

The few studies that attempt to shed light on the actual means by which firms learn also exhibit several shortcomings. For example, research typically highlights one particular learning mechanism such as codification (Feldman, 2004), vicarious learning (Baum, Li, & Usher, 2000) or experimentation (Brown & Eisenhardt, 1997) and fails to account for how combinations of mechanism work together. This failure is particularly problematic as learning from experience appears to be less a function of one particular deeply grooved mechanism and more a result from the interplay of several (Bingham,

2005). Research in this stream also offers little insight about how learning from successive events accumulates (Miner, Bassoff, & Moorman, 2001). In other words, existing research explores how firms learn during one particular event while under-exploring how they learn over the course of several. As salient, prior research that attempts to explain how organizations learn from experience usually focuses on homogeneous types of events and provides little understanding about how and what leaders learn from that those that are more heterogeneous in nature (Darr, Argote, & Epple, 1995; Lieberman, 1987).

Learning from heterogeneous is particularly challenging (Beckman & Haunschild, 2002; Haunschild & Sullivan, 2002). When experience is homogeneous, learning is fairly straightforward and simple. Managers initiate and consummate events for similar reasons, accumulate experience linearly in predictable and regular intervals, and increasingly rely on routine behavior over time (Argote, 1999). In contrast, when experience is more heterogeneous, initiation and consummation of each event occurs for unique, not similar reasons and experience accumulation more often takes place unpredictably and sporadically instead of predictably and regularly. These unique features of heterogeneous rather than homogeneous experience create difficulty in knowing (1) what learning should be done “off-line” before experience vs. “on-line” during experience (Baum, Li, & Usher, 2000; Gibson & Vermeulen, 2003); (2) which types of experiences are worth pursuing, and when and in what order should those experience be assembled (Brown & Eisenhardt, 1997); and (3) if processes become routine (Haleblian & Finkelstein, 1999). Overall, while much empirical data generally

support the fact that organizations learn from their experience, research is relatively silent about what is learned and the process by which this content develops.

The purpose of this study is to explore how organizations learn processes (e.g., product development, alliances, acquisitions, or internationalization) from their heterogeneous experience. Specifically, we ask What is learned and how is the content of that learning developed over time? We define an organizational process as the collection of organizational heuristics that leaders use for accomplishing a key task. Given the lack of prior empirical and theoretical research on the process of learning from experience, we use an inductive grounded theory-building approach (Eisenhardt, 1989; Glaser & Strauss, 1967) to explore how organizations learn from their internationalization experience. The setting is six technology-based entrepreneurial firms with headquarters in three culturally distinct countries (i.e., Finland, United States, Singapore).

The major results are theoretical insights regarding what is learned through experience and how that learning is developed over time. We describe how learning begins through the construction of cognitive templates that leaders use to seed initial experience not just through pure experiential learning alone (Anand & Khanna, 2000; Baum, Li, & Usher, 2000; Gibson & Vermeulen, 2003). We also show that learning continues through the formation of temporal heuristics, which help ensure that experience is accumulated in the proper order. Finally, we discuss how learning progresses through organizational behavior becomes *less*, not more, routine through experience.

From a strategy perspective, this study provides a more accurate view of how capabilities come to exist, a poorly understood, yet central question in the field. Much research implies that capabilities develop from path dependent, incremental adjustments

to stable and predictable patterns of semi-automatic behavior (Johanson & Vahlne, 1977; Kale, Dyer, & Singh, 2002; Nelson & Winter, 1982; Teece, Pisano, & Shuen, 1997; Zollo & Winter, 2002). Data in this study however, show that adjustments were often uneven and unexpected, not just incremental and expected. Intentionality is also key. So while path dependence is important, the executives in these firms were purposefully path dependent. They were to a large extent proactively choosing their own path. Overall, we attempt to develop a more dynamic and relevant view of organizational learning. Rather than viewing learning as a simple function of experience (Rapping, 1965) or relatedness (Haleblian & Finkelstein, 1999) we hope to shed light on the types and combinations of processes use to learn from their experience over time.

METHOD

The research design is a multiple-case, embedded study. Multiple cases allow the use of a replication logic. In contrast to a pooled logic, in which each observation is part of a larger sample, a replication logic views cases as a series of experiments, with each case serving to confirm or disconfirm the inferences drawn from the others (Yin, 1994). A replication logic using multiple cases generates results that are typically more generalizable and better grounded than those of single case studies. This study also uses an embedded design - that is, multiple units of analysis that include: (1) the country entry; and (2) the firm. Although complex, using an embedded design improves the probability of inducting richer and more reliable models (Yin, 1994).

The research setting is entrepreneurial firms. Entrepreneurial firms represent an attractive setting for several reasons. First, their smaller size enables better observation of

the learning process. Second, their newness allows tracking of the effects of experience from firm inception, and thus more accurately depicts how learning takes place over time (Argote, 1999). Finally, from a practical perspective entrepreneurial firms are crucial drivers of growth within the overall global economy (Schoonhoven & Romanelli, 2001).

The sample for this study is six firms. Specifically, we sampled firms in each of four technology-based industries: hardware devices, medical solutions, enterprise software, and security services. Individually, each of these industries is a global market with significant entrepreneurial activity. Collectively, they also have broad market diversity that helps create results that are more robust and externally valid. We also sampled two firms with headquarters in each of three culturally distinct¹ countries (i.e., Singapore, U.S., and Finland) (Hofstede, 1980, 2001). Such geographic stratification in the sample further enhances the overall generalizability and relevance of this study.

The focal experience is internationalization, a critical activity in the increasingly global economy (Aharoni, 1966; Govindarajan & Gupta, 2001; Kuemmerle, 1999). Internationalization² is a good choice to study learning effects for several reasons. First, each country entry during internationalization can be viewed both as a discrete and discernable event that can be explored as a single unit of analysis and as part of a larger sequence of experiences. This allows for more accurate understanding of how learning occurs. Second, since each country typically varies in its similarity and timing relative to

¹ Based on the four dimensions included in Hofstede's (1980; 2001) measure of cultural distance: power distance, uncertainty avoidance, individualism, and masculinity.

² Defined as institutional arrangements (e.g., partnerships, acquisition, or greenfield venture) to make possible the sale of a company's products in a foreign country (Root, 1994). Each country entry during internationalization begins when an employee, or corporate representative (e.g., partner) physically starts selling a firm's products in the foreign country.

other country entries, the effects of variation in experience on learning may be better analyzed.

We sampled firms that had entered at least four countries and that were currently entering at least one additional country at the time of data collection. This combination of retrospective and real-time data is particularly valuable. Retrospective data enables more efficient data collection of observations (leading to better grounding and higher external validity) while real time data collection creates further depth in understanding how events evolve, thereby improving internal validity (Leonard-Barton, 1990). Further, we sampled firms where all country entries had taken place within the five years prior to data collection. This improves the likelihood that management can accurately recall events surrounding internationalization.

Data Sources

We used four data sources: (1) quantitative and qualitative data from semi-structured interviews with company leaders; (2) archival data including business publications, and other materials produced inside the firm; and (3) e-mails, phone calls, and follow-up interviews to track the real-time internationalization process.

The main source of data came from semi-structured interviews. Specifically, we conducted over 50 interviews on three different continents over a 15-month period. The first phase consisted of approximately 15 pilot interviews with entrepreneurial firm leaders who could shed light on the internationalization process. The main phase consisted of interviews with multiple informants within each of the six firms (see Table 1). Multiple informants reduces potential informant bias by triangulating data across several sources (Golden, 1992; Miller, Cardinal, & Glick, 1997). It also and leads to more accurate and reliable models

through the addition of complementary perspectives of the same internationalization process (Dougherty, 1990; Schwenk, 1985). We used the CEO or Chairman to gain initial entry into each firm. We then used “snowball sampling”. This high-level contact identified other employees who had been actively involved in the country entry process, and then these employees identified others, as needed. Informants were typically two types. The first was TMT members. These included individuals such as the CEO, President, and VP of International if available. The second type was country-level employees. These included country managers and other executives directly involved in a firm’s entry into a particular country.

The interviews were 60-90 minutes. They followed a guide that had variations for the two types of informants. The interview with TMT members focused on gaining qualitative and quantitative data for the firm’s internationalization history and the lessons learned within successive country entries, while the interview with country-level informants focused on gathering deep qualitative and quantitative histories of entry into a specific country. Together, these two different types of interviews facilitated the collection of both an overall chronology of countries and depth of specific countries with triangulated informants (Yin, 1994). In each interview, we relied on a “courtroom” procedure where questions center on concrete facts and events rather than on personal interpretations (Eisenhardt, 1989). Centering questions on facts and events also helps reduce subject bias (Huber, 1985; Miller, Cardinal, & Glick, 1997). We also avoided the possibility of “leading” through direct questioning about specific constructs, but rather focused the interview on the chronology of events.

In all interviews, we used a series of closed and open-ended questions designed in three parts. In the first part, we asked for background information on the firm (e.g., overall and international strategies). In the second part, we focused on the open-ended internationalization chronology. In particular, we asked questions such as who was involved, how managers achieved their first sale, how they planned where to go next, and what they did similarly or differently from prior entries when entering each new country. We also prompted with more detailed follow-up questions (Galunic, 1994). The final part of the interview was closed-ended and designed to collect quantitative data on specific constructs such as performance and communication. The a priori specification and measurement of likely-to-be-important constructs is valuable as it permits better empirical grounding. The combination of qualitative and quantitative data is particularly important as it not only helps develop deep understanding of focal companies but also creates the sharply defined and measurable constructs needed for generating good theory.

The majority of interviews were tape-recorded and transcribed within 24 hours. If data required clarification, we sent follow-up emails and conducted additional interviews. Some informants were interviewed as many as three times. Interview data were also triangulated with archival data such as press releases and annual reports. Triangulation of data further improves reliability by providing a check against the accuracy of informant responses (Jick, 1979).

As informant bias is an important consideration in this research, we addressed this issue in several ways. First, we used both real time and retrospective data. As mentioned earlier, such a combination is ideal, with the retrospective data enabling efficient data collection of more observations (thus enabling better grounding) and real time data

mitigating retrospective bias (Leonard-Barton 1990). Second, we used interview techniques (e.g., “courtroom” questioning, event tracking, non-directive questioning) that prior research has shown to typically yield accurate and convergent information from informants (Huber, 1985; Huber & Power, 1985). Third, we relied on informants at multiple levels of hierarchy (e.g., CEO, VP, and country-level) and at different functional areas (e.g., sales, finance, and product development). This improves the likelihood of yielding a more complete and accurate picture of events due to triangulating perspectives. Combining qualitative stories with quantitative measures has similar effects. We also relied on informants who are particularly knowledgeable about the country entries and for whom they were quite important. Previous research shows that such informants are more accurate (Kumar, Stern, & Anderson, 1993; Siedler, 1974). Fourth, we used anonymity for both companies and informants. This encourages candor. Finally, we complemented interview data with archival data. In sum, although no method is perfect, the combination of these steps improves the likelihood that the methods will yield rich, detailed, and accurate accounts of the capability development process that occurs in the focal firms.

Data Analysis

As is typical of inductive, multiple-case research (Eisenhardt, 1989) we began data analysis by synthesizing all the interview data and the archival data of a focal firm and building individual case histories. In each case history, we described the internationalization chronology, focusing on the actions of leaders and managers throughout the process. A primary feature of writing the histories was triangulation among interview and archival data in order to generate a more accurate and reliable account of internationalization within each firm (Jick, 1979). The individual case histories ranged between 30-60 pages, inclusive of

interview quotes, summary tables, and charts of key facts. This process took approximately five months.

We used individual case histories for two types of analysis: within-case and cross-case. Within-case analysis concentrated on developing generalizable constructs and unique patterns that emerged for each firm and proceeded in an iterative fashion with data collection in order to better ground and thus improve resultant theory. In addition, a second researcher read through all original interviews and formed an independent perspective of each case. Incorporating the added perspective of this second reader into each case also helped provide a stronger and better-grounded summary for each firm during within-case analysis.

After building all cases histories, we began cross-case analysis. As is typical with cross-case analysis, we looked for the emergence of similar themes and constructs across multiple cases using a variety of lenses (e.g., headquarter country and internationalization patterns) (Eisenhardt, 1989). To facilitate overall cross-case analysis we also employed the extensive use of charts, tables, and other cell designs to compare several categories at once (Miles & Huberman, 1994). From the patterns that emerged, we formed tentative propositions. I refined initial propositions through a replication logic, continually revisiting data to systematically compare and verify the occurrence of specific themes within each separate case. This constant iteration between theory and data helped sharpen constructs, strengthen the internal validity of findings, and raise the generalizability of results by enabling more frequent comparison of emergent theory with concepts and constructs from the extant literature. The cross-case analysis took approximately five months and helped result in a theoretical framework for how executives develop capabilities.

LEARNING PROCESSES FROM HETEROGENEOUS EXPERIENCE

We define an organizational process as the collection of organizational heuristics that enable managers to accomplish a key tasks. Accordingly, we measured an internationalization process by assessing the heuristics managers used for internationalization within each firm. These heuristics emerged from the data after examining the specific actions of managers that occurred before, during, and after each of the firm's country entries (see Table 2 for an example). We coded each action as a heuristic if it consisted of a recognizable guide for internationalization that was understood and used by multiple people.

Cognitive templates with Unexpected Errors

Prior literature suggests that learning occurs through the experiential process of “doing” (Chang, 1995; Kale, Dyer, & Singh, 2002). Organizations accumulate early experience by “muddling through” and then generalize this experience to subsequent experiences. This process of early acquisition and generalization of experience results in an increased stock of experience-based knowledge that constitutes learning (Haleblian & Finkelstein, 1999; Lieberman, 1987).

In contrast, these data suggest that learning begins before there is any “doing” at all. Rather than starting internationalization reactively, or jumping in blindly and figuring out the process along the way, leaders actively seeded their internationalization experience with a cognitive template. More specifically, data revealed that prior to internationalization managers intentionally created a mental “draft” of their internationalization capability to help guide and direct future behavior. While the origins of these cognitive templates came from several sources, ranging from the prior experience of highly knowledgeable executives to the intuition and foresight of neophyte founders, their structure was strikingly similar.

Specifically, data showed that cognitive templates took the form of a few boundary heuristics, defined as guidelines and rules about which opportunities to target (e.g., countries and customers) and a few process heuristics, defined as guidelines and rules for capturing target opportunities (e.g., sales approach and entry mode) (see Table 3).

One illustration is Echo, an information security services company headquartered in Singapore. Two men from Hong Kong founded Echo in early 2000 with the goal of creating a technology company that would assist customers in identifying and managing risks related to information technology security. One of the founders was 45. He had worked with Hong Kong Telecom for 21 years where he managed datacenters. Five of those years were spent outside of Hong Kong. The other founder was 43. He had lived outside Hong Kong for eight years as the regional VP for IBM Asia, overseeing the business operations of 13 countries. Based on their extensive industry and international experience, the two founders created several boundary heuristics prior to internationalization. One was a country rule to restrict the scope of internationalization to Asia. This rule was based on the founders' regional work experience. They believed that creating early presence in Singapore and in Hong Kong would allow the young company to cover both North and South Asian markets. The founders also formed sharply defined product and customer heuristics prior to internationalization. For example, management's customer rule was to target government and financial institutions. One founder recalled:

From my understanding of the market from the beginning, it was info-security. Look at who cherishes the information more. If we talk to small solo enterprises they don't even bother, but banks and government care."

Echo's founders also created a few process heuristics prior to internationalization. One was for managing sales. Leaders mandated that sales be directed to IT groups within

customer organizations and rely on an approach that forcefully highlighted the salient features and functions of Echo's technology. Another process rule was for mode of entry. Management required that mode of entry be through joint ventures with large established local partners who could act as proxies for trust to local businesses. As the CEO later stated, "Because we are in the trust business, we are selling trust. When you outsource info security, that is very sensitive stuff, you must trust that party. All the JV and franchise partners we have must demand the trust in that country."

Another illustration of a company that used a cognitive template is Finland-based Alta. After being started by a 50 year-old Finn who had over 20 years of work experience in the Finnish retail industry, Alta incorporated in 1997. This founding CEO and his small top management team decided to create a point-of-sale software solution that would help retail organizations better manage their inventory. Realizing their limited international experience, leaders at Alta created several boundary heuristics prior to internationalization. One was a country rule where executives limited internationalization to Scandinavia, even though this meant forgoing opportunities in other larger markets. The Chairman summarized the rationale for the rule as, "I remember when all these analysts were blaming us that we were too conservative because the market was in the United States. We started with Sweden, which is closest here. I said that we have to have the learning process."

Leaders also set a few process heuristics prior to internationalization, including ones about which sales approach to employ. Specifically, they decided to highlight their software's ability to expertly manage supply chains. A VP of marketing recalled:

In terms of our retail market, there's basically a general list of key indicators they're looking for in terms of software—reduced stock, control, inventory, improve, replenishment processes. Basically cutting costs out of their supply chain. So they're all thinking about the same things. The local variations have to be included but there's a core set that which can be applicable to any country.

Management also formed a mode of entry rule. Entry should be done through acquisitions. Relying on acquisitions would allow Alta to gain access to needed technology and valuable human resources in the form of host country employees who would know how to effectively conduct business in the local market. As one top management team member stated, “Our idea was first of all to buy the new technology.”

As a final example, the young executives at Crest created a cognitive template for internationalization. Three young entrepreneurs who had recently graduated from Helsinki University of Technology founded Crest. Each was about 25 years old, and had very little industry or international experience. For example, one had spent a year at McKinsey and a year doing academic research, while another had spent several months working for a few local pharmaceutical companies. The three founders started Crest in the second quarter of 2000. Their intention was to create software to expedite drug discovery within the pharmaceutical industry. More specifically, they developed a software solution that allowed patients, clinical research professionals, and data managers to quickly capture and accurately report clinical data through PDAs, cellular phones, and personal computers during phase-three clinical trials.

Although the founders at Crest were very inexperienced, they used both foresight and intuition to create several boundary heuristics. One was a country rule. Because the firm had headquarters in Finland, a market with only modest pharmaceutical activity, management decided to target countries with lots of pharmaceutical activity. One of the co-founders explained, “Even before we did our business plan, we decided there is no way to just focus on Scandinavia, but that we wanted to be a global company. That was not just based on some strategic jargon at the time. We wanted to be international based on our target audience.”

Management also created well-specified customer and product heuristics. For instance, product rule required employees to promote the firm's multi-channel electronic diary solution. Finally, the founders created a basic process rule prior to internationalization. Because the start-up had limited capital, executives decided that country entry would take place by sending in a young inexperienced, yet assertive, Finn who would actively cold-call all pharma companies in the local area.

Surprisingly, data from the study reported here also showed that while cognitive templates served an important role in seeding experience, they were usually flawed in some fundamental and unexpected ways. For some firms, boundary heuristics were wrong. For other firms, process heuristics were wrong. Still other firms suffered from a combination of errors. In general, while learning from experience began with rough cognitive templates, following these templates led managers to commit at least one major error early on. Yet instead of ignoring or delaying attention to unexpected errors, leaders at these six firms incorporated the valuable knowledge embedded in them to quickly fortify the structure of initial learning (see Table 4).

Echo's cognitive template, for example, was flawed in several areas. For example, in firm's first country entry into Hong Kong, management realized the company's sales heuristics were incorrect. When leaders entered the country, they had followed their pre-internationalization template that prescribed focusing on IT groups. However, management discovered that corporations in Hong Kong had begun to shift responsibility for information security out of IT and into audit. As one senior executive explained, "There are a lot of organizations, including banks, which have transitioned from info-security under IT to now, now info-security under group audit." Echo's features sales approach was also wrong. Hong

Kong organizations wanted more of a consultative sales approach rather than one that pushed a particular technological solution. As a result of these errors, management changed its early template. The sales rule thus changed from targeting IT groups with a features selling approach to targeting audit groups with a consultative selling approach. Because leaders addressed these errors early on, they avoided similar problems in subsequent entries. As the CEO remembered, “Malaysia is one year later than Singapore and Hong Kong, so they didn’t need to make the same mistakes.”

Alta’s cognitive template also revealed flaws after starting internationalization. As one illustration, while the firm’s initial country rule was to target was Scandinavian countries, management realized soon after entering Norway that the same countries were too small to justify a direct presence. Leaders therefore changed their country selection rule. The geographic focus shifted from Scandinavian countries to “large European retail markets.” The CEO later recalled, “the Norway market is really small, so it’s not our strategy to be there ourselves.”

Crest’s cognitive template likewise revealed unexpected errors. When the firm entered its third country, the Czech Republic, management quickly realized their initial country rule of targeting markets with lots of pharmaceutical activity was wrong. While the Czech Republic did have a lot pharmaceutical activity, and potential Czech customers did appear interested in Crest’s electronic diary solutions, Czech firms had little money to pay for Crest’s technology. Instead, money for Crest’s technology was in nearby Germany, where several local pharmaceutical companies had headquarters. From this unexpected error, Crest management changed its country rule. Employees no longer targeted countries based on pharma activity alone. Countries also needed to have pharmaceutical headquarters. Crest’s

Czech Republic experience also caused management to change initial customer heuristics. Before beginning internationalization, Crest's customer rule relied on a basic qualifying question: "Have they used a patient diary before?" After the Czech experience, the rule was changed to, "Look at the exact study volume by therapeutic area, their related budget, and their ability to pay."

Why are cognitive templates useful for learning? Data suggests several reasons. One may be that cognitive templates provide a head start to experiential learning. Cognitive templates allow individuals to form expectations of the future. They emerge as people go through the mental exercise of thinking about and creating a preliminary plan for how they will respond to highly probable downstream events (Eysenck and Keane, 1995). Such mental preparation and anticipation of upcoming experience lowers the likelihood of leaders acting impulsively or reactively when experience does begin, and thereby reduces the degree and extent of lessons learned through "the school of hard knocks".

A second reason may be that the simple structure of cognitive templates facilitates change. Studies show that the absence of structure can make change disorganized, chaotic, and difficult to coordinate (Okhuysen & Eisenhardt, 2002). But, studies also describe how too much structure can make change difficult by creating rigidity (Dougherty, 1992; Siggelkow, 2001). In contrast, findings show that cognitive templates act as semi-structures. Semi-structures provide enough organization that change can take place, but are not too unorganized that change cannot occur (Brown & Eisenhardt, 1997). Overall, cognitive templates are starting points, not end points. Like prototypes, they impose enough structure so that individuals can get "on the same page" and have direction regarding corporate objectives (Locke & Latham, 1980), yet are not so rigidly

locked into place to prevent the emergence of new strategic approaches to organizational action.

A third reason may be that cognitive templates speeds learning by clarifying what is wrong and how to fix it. Cognitive templates are knowledge structures that categorize stimuli (e.g., types of countries, customers, mode of entry). Such categorical structure reduces the amount of information processing needed to identify expected outcomes and frees up more time to address those that are unexpected and perhaps vital for improving initial capabilities (Friedman, 1979). It also permits executives to more accurately and more rapidly pinpoint where improvements are needed (e.g., “this is a country error,” “this is the wrong type of customer,” or “this mode of entry is incorrect”).

A final reason may be that cognitive templates help give executives the confidence to act in uncertain environments. When settings are unfamiliar, it is easy for leaders to become confused. Intriguingly, research shows that mental frameworks, *even if flawed*, help people cope with such situations (Weick, 1993, 1995). Weick (1993), for example, described how possession of physical map helped a small Hungarian detachment that was lost in the Swiss Alps find its way back to base camp even though the map was not of the Alps but of the Pyrenees, a mountain range several hundred miles away. In short, sketching a rough mental plan for the future in the form of a cognitive template animates and orients executives. It gives them a better understanding of options and provides them with a greater sense of control (Langer, 1975). This in turn provides more confidence to act.

Temporal heuristics

Prior literature suggests that learning continues to develop through the process of elaboration (see Table (Eisenhardt & Tabrizi, 1995; Fredrickson, 1984; Pisano, 1994;

Yip, 1992). Consistent with such research, data show that over time managers added action steps to initial heuristics in order to enhance the stability of key processes (Argote, 1999; Nelson & Winter, 1982; Zollo & Winter, 2002). Alta is one example. Prior to internationalization, the top management team created a process rule stipulating that the firm should enter new countries through acquisition. During the course of several country entries, management continued to elaborate this original rule. For example, after its first country entry into Sweden, management noticed that one key to acquisition success was having support from the target company's management. Leaders thus changed the rule. The CEO explained, "We don't buy the company if we are not 100 percent sure the management is behind us, even if the company is good...If they are then we make the acquisition." Thus, the original rule of "enter new countries through acquisition" became "when entering new countries through acquisition, *ensure that target's management is 100 percent committed to the deal.*"

Executives elaborated the rule again after entering the firm's third country, France. Alta's acquisition to enter France was much larger than those conducted in the past, and so required leaders to spend substantial time making sure the target was relatively clear of unforeseen future liabilities. One leader recounted, "our due diligence process was much tougher in France because it was much bigger company than in Sweden...what we did was discuss the acquisition with their biggest customers to get their opinion about us." This experience prompted management to further elaborate the firm's existing acquisition rule. What had been "when entering new countries through acquisition, ensure that target's management is 100 percent committed to the deal," before France, now became "when entering new countries through acquisition *do*

extensive due diligence and ensure that target's management is 100 percent committed to the deal.”

Executives also elaborated the rule after entering Germany, the firm's fourth country. Because Alta management was concerned about continuing to motivate the management teams of acquisition targets, the company invested heavily in post acquisition integration. This point was supported by a VP who stated, “I spent a lot of time in Germany after we made the two additional acquisitions...I spent a lot of time there to make sure that we integrated them and explained to them our values and how they would address new markets.” This experience led management to further elaborate its acquisition rule around integration. Overall, what began as a simple process rule “enter new countries through acquisition” resulted in a rich elaborated process four entries later: “when entering new countries through acquisition do extensive due diligence, ensure that target's management is 100 percent committed to the deal, and invest in post-acquisition integration.”

In contrast, while elaboration was expected, another change to initial learning was much more unexpected. Shortly after beginning internationalization, executives created temporal heuristics (see Table 6). Temporal heuristics emerged from the data. They took the form of *temporal* guidelines and rules about (1) pacing, defined as the overall speed of internationalization; (2) destination, defined as the country or countries the firm was moving towards; and (3) sequence, defined as the series of countries the firm need to move through in order to arrive at the destination.

U.S. based Center provides a good example of a firm that incorporated temporal elements into its process. Center provides semiconductor solutions for GPS-enabled mobile

devices and began in 2000 as the third start-up of a Chinese-born American. Although the company had developed a cognitive template with a few boundary and process heuristics for *how* to internationalize, they needed guidelines about *when* to do it. Management therefore, created several temporal heuristics. One was a pacing rule. Following the CEO's timeline for success established in his previous two startups, company management decided to pace its firm's overall internationalization process. Specifically, leaders created an internal timetable that pushed employees to become one of the leading semiconductor firms for mobile devices throughout Asia, Europe, and North America in "three years."

Leaders also created a destination rule. Management was actively moving towards what it termed "tier-one" countries. These consisted of the large end-markets for mobile applications and included Japan, Germany, and the United States. Yet, as a young semiconductor provider, management realized that trying to sell its product in tier-one markets from the beginning would be extremely challenging. The firm lacked the credibility and history for tier-one companies to take the start-up seriously. As the VP of Sales described, "If we started right off and tried to talk to Dell, they would not have given us the time of day. But then if you go to Dell and say 'By the way, we are shipping half a million or million PDAs on pocket PC right now, and our cost is about \$40 lower than what you are using,' that's a huge deal...They won't take their time until they see a validated platform."

A sequence rule was therefore added to the firm's existing collection of heuristics. Management would first get accounts from customers in tier-three counties like Taiwan. Next, executives would use tier-three accounts to get customers in tier-two countries like Korea. Finally, leaders would use tier-two accounts to facilitate entry into larger tier-one countries like Japan. A senior executive described the approach, "So our marketing strategy

has been trying to get the credible players from the tier-three, tier-two countries– the big fish in the small pond...If they adopt your platform and you ship in mass production, then you leverage that to get into the tier-one in Japan, Germany, and North America.”

Echo also created temporal heuristics. Shortly after internationalization, leaders created a pacing rule to regulate its expansion speed. Rather than engage in multiple country entries, they decided to enter one at a time. A senior executive stated, “start in one country, make it work, and then replicate.” By pacing the transition toward the future, company management could help ensure that lessons from previous country entries could be brought forward. For example, one country manager noted that because the headquarter country of Singapore was ahead of several other Asian countries on the technology curve, it could give other regions such as Malaysia “a preview of what it will be like in the next one to two years.”

Echo executives similarly added a destination rule. Employees were to move actively towards entering China. However, as leaders developed its plans for internationalization in early 2000, they knew that China’s market was not yet ready for information security services. As one top management team member stated, “from the beginning we did not expect we would make a lot of money from China straight away.” Therefore, in order to get to China, leaders created a sequence rule. The plan was to use Hong Kong as a springboard into China. Hong Kong was attractive as a springboard in several ways. First, it was geographically proximate to China. Second, it was politically neutral enough to serve the Taiwanese market as well. In contrast, Taiwan was too politically charged to serve both Hong Kong and China. Using Hong Kong as a sequenced step was also important because it allowed management to take advantage of a currently developed market for information

security services and at the same time make the necessary preparations to enter China when demand in that country was sufficient.

At Grand, managers created temporal heuristics too. Grand was founded in 2000 by three founders – one from Taiwan and two from Singapore. The one from Taiwan was 30. She had worked at SAP Taiwan for a number of years. During her experience at SAP, she had worked for another one of the founders who had also spent several years with the firm (one in Singapore, one in Japan, two in the United States, and three in Taiwan). The third co-founder was a 30-year old Singaporean who worked for McKinsey in Singapore before leaving to start Grand. Based on their combined experience, the three founders came together with the idea of forming a supply chain software company that would target the high-tech manufacturing industry.

Shortly after beginning internationalization, management created a pacing rule. This was developed after entering Taiwan, their first country, too fast in order to take advantage of a perceived opportunity. However, the opportunity never materialized. This result caused Grand managers to slow their overall speed of internationalization. Specifically, they developed a pacing rule where internationalization would be entrained according to market readiness. Thus, when entering the U.S. in early 2001, country managers moved slower than when entering Taiwan due to general consumer reluctance to buy new technology. One leader recalled:

What we did was maintain a very slim, lighthouse-like watching post infrastructure to support our global operations in terms of inquiries, in terms of meeting the key people who were going to make the decisions. It was different than what we did in Taiwan since there we started out with six-eight people straight away and then we decided that the market was not ready for us at that time.

When entering Japan in the fourth quarter of 2001, Grand management slowed the pace of entry further based on market readiness. While the Japanese appeared to appreciate

Grand's technology, their consensus driven decision-making and their attention to detail and documentation meant that Grand management needed to endure a very long sales process. The chairman noted, "the way Japanese make decisions requires consensus, so usually it takes a longer time." Finally, when entering China in the second quarter of 2002, management slowed the pace even more. Because supply chain businesses in China were just beginning to gather traction, leaders decided they needed to wait until they had an appropriate partner capable enough of helping the firm introduce its products into the local marketplace. A cofounder added, "...the China market is not quite ready and also we've heard a number of horror stories about China, so we're moving very cautiously about going into China."

Managers at Grand also created other temporal heuristics. After beginning internationalization, leaders created a destination rule that centered attention on entering the largest market in Asia - Japan. As a senior VP explained, "We've always been eyeing the Japanese market." However, as executives probed into early opportunities to enter Japan, they realized that Japanese customers were not interested in buying Grand products unless the company had American references. One of the founders explained:

"We think that the Japanese customers did not respect us when we said that we were a Singaporean company...I think it is a prejudice on their part. Japan looks to the U.S. as being at the forefront of technology, but not to the rest of Asia. They see themselves foremost in Asia. It can't possibly be this small company coming from Southeast Asia saying it has technology that we don't have."

To address this situation, which was referred to as the "pecking order of nations," leaders formed a sequence rule. In order to enter Japan, Grand management would first build their product in relatively low-cost Taiwan. They would then enter the United States to get American customers whom they could use as references accounts to later enter Japan. A top management team member remembered the difference such a sequence rule meant for the

firm's effectiveness. "Their faces changed when we said we were a U.S. company, when we started giving the Grand Inc. business card. They were much more receptive then."

Why are temporal heuristics associated with learning key processes from heterogeneous experience? One reason may be that time improves sense making. Research in psychology shows that making sense out of life requires that individuals learn how to accurately represent not only who and what are involved in events, but also when and how often events take place (Siegler, Deloache, & Eisenberg, 2003). Yet, research also shows that while critical, the ability to incorporate time does not form all at once. It develops over time (Fraisse, 1982). For example, infants do not understand time well. Only after children reach the age of five are they able to more accurately gauge duration of events in addition to their order (Fraisse, 1982), and it is not until age 10 that they are able to expand their time horizons to include both the past and the future (Friedman, 2000). These observations suggest that one of the reasons that time is not present in cognitive templates may be that the process of organizational learning development reflects the natural process of conceptual development. That is, managers begin with a few basic boundary and process heuristics and then add temporal heuristics.

Another reason may be that temporal heuristics force managers to build experience in an appropriate order. Just as order of assembly is crucial when building a home or baking a cake, so order of experience is critical when developing capabilities. This suggests that particular types of experience are more appropriate at different points during the process of accumulation than others (Saunders & Jones, 1990). As executives temporally structure learning, experience useful in earlier stages can be identified and pursued first, while experience useful for later stages can be anticipated and pursued later. Overall, data show

that by carefully considering the distinct characteristics and roles of countries during the process of internationalization, managers were able to expedite learning by selecting and accumulating experience in ways that maintained momentum and more effectively built off what had been accomplished previously.

A third reason may be that the structure of temporal heuristics mirrors the steps of problem solving. Temporal heuristics involve managers knowing where they are now, where they want to go, and the steps to get there. Similarly, problem solving studies describe how effective problem structures are defined by the same three elements: (1) an initial state; (2) a goal state; and (3) a set of steps necessary to move from the initial state to the goal state (Newell & Simon, 1972). Research also shows that much of the challenge of solving problems comes when any of these three elements are missing (Simon, 1973). These studies suggest that management's inability to learn from experience is analogous to having an ill-defined problem. That is, it happens where an initial state, goal state, and/or set of operations may be only vaguely sketched a priori.

A final reason is that temporal heuristics facilitate learning is that they create continuity between experiences. Often when firms engage in heterogeneous experiences such as internationalization, the present and future become disconnected. Some managers concentrate on creating value from focal countries while others focus on those planned for the future. Temporal heuristics bring the present and future together in orderly ways that help organizations get into a "flow" and create the impetus to move forward in a coordinated manner (Brown & Eisenhardt, 1997). In fact, research shows that a major difference between experts and novices in physics is that experts tend to work forward toward solutions, while novices work backwards (Larkin et al., 1980). Taking an "ad hoc" approach and

reacting only to the present can leave firm leaders feeling like Alice in Lewis Carroll's classic *Alice's Adventures in Wonderland*. When Alice finds herself coming to a crossroads with several paths before her, each stretching in different directions, she asks the Cheshire Cat, "Which path shall I take?" The cat responds, "That depends where you want to go. If you do not know where you want to go, it doesn't really matter which path you take."³ Without temporal heuristics to create a focusing flow of attention and keep leaders pointed and moving in the right direction, entry into any number of countries could be subtly misperceived as equally good.

Shifting Levels of Abstraction

Previous research suggests that processes become more routine with experience (Dosi, Nelson, & Winter, 2000; Fredrickson, 1984; Nelson & Winter, 1982). Here, organizational behavior to accomplish key tasks becomes more taken-for-granted and detailed over time. For example, Fredrickson (1984) described how strategic decision making in the paint industry evolved into a quasi-automatic process that started with data accumulation, moved to the generation and testing of alternatives, and finally resulted in choice. Likewise, Eisenhardt and Tabrizi (1995) found that ongoing product development of large firms in the global computer industry evolved into a relatively habitual set of actions beginning with development and ending with implementation.

Surprisingly however, our data revealed that learning develops as processes become less, not more, routine through experience. Over time, managers learned to mindfully shift heuristics to accomplish internationalization, rather than mindlessly repeat the same set of heuristics in each country entry. Likewise, managers often kept heuristics for internationalization purposefully simple rather than making them increasingly

³ See Lewis Carroll, *Alice's Adventures in Wonderland* (1992), 89.

complex. How did this happen? Two patterns emerged from the data (see Table 7). One was lowering the abstraction of heuristics. This consisted of executives making an existing boundary or process rule crisper and more sharply specified. The other was raising the abstraction of heuristics. This consisted of executives creating a broader or more general conceptualization of a boundary or process rule in ways that disassociated the rule with a particular application or instance.

Our data showed that leaders often learned a key process by lowering the abstraction of heuristics through experience. Executives at Alta, for example, lowered the abstraction in their customer heuristics. Before entering the U.S., top management team members conducted a market study that identified two specific competitors who posed particular threats within the retail industry Alta hoped to penetrate. While management believed the firm's supply chain software solution was better than that of the competitors, they also knew they needed to be careful since the firm suffered from bias against foreign solutions. Therefore, management decided to lower the abstraction of its customer rule. Instead of targeting the broad category of "retail customers" as it had previously, it now focused on a smaller market segment that the firm could exploit in a more concentrated way - medium sized grocery companies. The Deputy CEO explained the rationale for lowering abstraction:

We decided that we would go first for this market. Our solution is able to provide for a wider market in U.S., but we decided that we would focus on this market because the project would be quite secure. I was sure that we would have no problem with the project. We were also sure that we were better than the U.S. solution in this market.

Crest managers also lowered levels of abstraction in heuristics. For example, during the firm's second country entry into the U.S., the management team began with a customer rule of targeting all pharma customers. However, after closing a few small deals, leaders

realized that its real focus should be on top 20 global pharma companies. As one leader involved in the process recounted, “We came to the conclusion that the pharma industry is so much big company driven. So if you are doing business with the small guys nobody cares...” Crest management used this information to lower the abstraction of its customer rule and create more specific focus on top 20 pharma companies rather than all pharma companies.

Management at Grand lowered abstraction in country heuristics. While beginning internationalization, the firm’s country rule consisted of targeting Asia and the U.S. However, as time went on, Grand leaders began to see a lot of corporate evangelism around an e-business standard called RosettaNet that focused on different aspects of business-to-business (e.g., transactions, payments, inventory management). Because the founders had formed good ties with the RosettaNet organization in their home county of Singapore and had experience leveraging the standard for companies in Taiwan (their first country entry), they decided to “ride on the coattails of this new international standard.” In other words, management lowered the abstraction in its country rule and riveted attention on countries promoting RosettaNet. A top management team member stated it succinctly, “I would think that in all the countries where we go RosettaNet is always the entry point for us.” Therefore, when RosettaNet opened an office in Malaysia several months later, Grand management saw this an opportunity to enter the country. The CEO explained, “We saw the opportunity with this new standard being taught to Malaysia. That’s how we started moving in.” Another senior leader concurred, “Malaysia happened to have a strong enough consumer base that embraced the standard. So it was a natural next step for us.” When RosettaNet set up an office in the Philippines several quarters after Malaysia, Grand management also relied on

the rule. One of the founders recalled, “the reason we are going to the Philippines is partly because of RosettaNet.”

Conversely, data also showed that leaders sometimes raised the abstraction of heuristics to further improve learning of key processes. One example is Echo. When the firm entered its second country, Malaysia, management was surprised that few companies wanted to purchase the company’s 24x7 security monitoring solutions. Leaders discovered that the root of the problem was Malaysia’s technology infrastructure, which was poor relative to Singapore. As one manager recounted, “Malaysia is basically still a developing country and there is a lot of security infrastructure that was not set up. Firewall or intrusion detection were not set up, therefore there was nothing for us to monitor.” To help local firms create security infrastructure in a country with an underdeveloped technology backbone, Malaysia’s country manager requested resources to backward integrate into novel product offerings such as firewall and intrusion detection. As a result, management raised its product rule to a higher level of abstraction. What was previously a focus on 24x7 monitoring services now became the higher-level “push security services integrations.” Another leader recounted, “In the last two or three years we added on other info-security services. Now we have a full spectrum of info-security services.”

Echo management also raised the level of abstraction in its customer heuristics. From the company’s inception in Singapore, Echo leaders had targeted government and financial institutions as its primary customers. However, upon entering Malaysia management discovered that because of tenuous cross-border relationships, Malaysian government accounts were reluctant to turn over their IT security needs to Singaporean firms. This inability to find enough government customers forced managers to reflect on their customer

rule. They realized that, while government and financial institutions did indeed value the need to protect intellectual assets, other large and financially stable firms did too. Management therefore, raised the abstraction of its customer rule from “target government and banks” to “target large organizations with proprietary information and the ability to pay.” The shift to a higher level of abstraction provided direction regarding the profile of target customers yet allowed managers to flexibly pursue customers throughout a variety of industry types depending on local market demand. As a result, leaders were able to take serendipitous advantage of emergent opportunities for business with large insurance companies in Malaysia, with large manufacturing firms in Japan, and with state owned enterprises in China.

Crest executives also raised the level of abstraction in several of its heuristics. When entering the U.S., leaders relied on a previously established hiring rule that consisted of “hire locals based on online resources”. However, as Crest executives wanted employees with both clinical development skills and technical skills, finding people over the Internet who were competent in both areas and who wanted to join a small foreign company without any established brand proved extremely difficult. As a consequence, adherence to the early rule resulted in a few rash hiring decisions that proved costly to undue. To help solve the issue in the U.S., management turned to its seasoned board of directors to screen potential hires. It also used references from FinnPro, a Finnish government body established to help young Finnish firms move abroad. Through the experience, Crest management realized that the company’s previous hiring rule needed to be changed to emphasize the importance of getting the right person over finding any average person fast. Thus, leaders raised its previous hiring rule to a higher level of abstraction. What previously had been “hire locals based on online

resources” now became “ensure strong hires.” The more abstract rule provided an overarching objective regarding hiring, but did not prescribe how the process needed to occur. This let managers improvise hiring specifics according to the unique circumstances of each new country. For example, during its later entry into Germany, management used headhunters (not online resources, board of directors, or FinnPro) to find strong local talent.

Why is shifting levels of abstraction useful in the learning process? The data suggest several reasons. First, shifting levels of abstraction promotes a more efficient and flexible, yet coherent strategy. Lowering abstraction in heuristics increases efficiency by sharpening focus on target areas of most strategic importance. This reduces search costs by decreasing the amount of time leaders need to analyze new opportunities. Raising abstraction, alternatively, promotes flexibility in strategy implementation. It facilitates the emergence of fluid and extemporaneous action within the structure of an overarching strategic frame (Miner, Bassoff, & Moorman, 2001). It keeps organizational members’ behavior bounded and at least partially aligned, without becoming excessively constrained. This in turn enables individuals to take better advantage of unexpected events that surface “on the fly.”

Second, raising levels of abstraction pushes executives toward higher order thinking which enables greater creativity through improvisation. Raising abstraction forces individuals to sort relevant structural features from irrelevant surface features. It also facilitates thinking that helps executives move beyond conventional ways for solving problems (i.e., functional and operational fixity) to consider those more unconventional in nature. This process fosters the development of more advanced problem solving and in particular, the ability to reconceptualize problem structures such that leaders can solve them in more innovative ways (Dunker, 1926; Scheerer, 1963). For example, in a famous Gestalt

psychology experiment, Dunker (1926) gave subjects a box of nails, a candle, and matches, and a few other miscellaneous items and asked them to attach the candle to the wall so that it would not drip onto a table below. He found that subjects' ability to abstract the conceptualization of the empty nail box as a shelf that could be nailed to the wall to hold the candle and catch the drips, was critical in allowing them to solve the problem.

Finally, shifting levels of abstraction reduces failure and improves reliability as executives become more mindful and less mindless in their actions. When executives act mindfully they are more attentive, purposeful, vigilant, and conscientious about behavior (Langer, 1989; Weick, Sutcliffe, & Obstfeld, 1999). Ryle (1949), for example, described how the artful and decisive tripping of a circus clown is mindful, not because thought preceded the tripping, but because the actions involved in the tripping suggests to the audience qualities such as "noticing, attending, applying one's mind, concentrating, thinking what one is doing, interest, intentness, studying, and trying" (Ryle, 1949: 136). In general, these qualities imply behavior that is careful and thoughtful, not careless and thoughtless. Mindful action then is not the same as routine action. Routine action consists of relying on the familiar and known, focusing on a set solution, and acting on automatic pilot. Such action often results in mechanically employed behavior. Mindful action, in contrast, involves continual learning and alertness to changes in experience. It often stems from failure (Langer, 1989) and requires making calculative choices that are most appropriate for a firm's current experience rather than repeating set-in-stone solutions that worked in the past. Those who are mindful consider larger distinctions in behavior and create nuanced responses that are more pertinent and more precise for focal events (Fiol & O'Connor, 2003). Overall, these observations suggest that learning from experience is not just about acquiring procedural

knowledge in the form of heuristics about how and when to accomplish a key process. Rather, it also includes changing abstraction so that executives can mindfully shift heuristics in order to meet the demands of new situations.

DISCUSSION

The purpose of this paper is to explore how organizations learn from their experience, and in particular, how they learn from heterogeneous types of experience. In addressing this agenda, we focus on how learning begins and develops over time. Overall, we find that learning starts with cognitive templates that executives create to seed experience, not with pure experiential learning. As initial cuts at learning, cognitive templates are often wrong in major ways. Second, learning further develops as leaders understand not just more about *how* to accomplish a task (i.e., elaboration), but *when* to accomplish it (i.e., temporal heuristics). Finally, learning continues to evolve as executives heedfully shift levels of abstraction in heuristics through experience, not by heedlessly repeating them over time as some studies would suggest. These findings link to several research areas.

Relevance of learning

This work ties closely to organizational learning research by helping uncover the vaguely understood processes by which firms learn from heterogeneous experience (e.g., Darr, Argote, & Epple, 1995; Levin, 2000; Zollo & Winter, 2002). First, this study highlights the role of cognitive templates in improving organizational learning. While prior research has described the benefits of cognition on experience (e.g., Gavetti & Levinthal, 2000), this study extends that body of literature in several ways. First, we discuss the origins of templates, that is, that they stem not only from the prior experience of seasoned executives, but also from the foresight of neophyte entrepreneurs. Second, we detail the

specific content of templates. In particular, we submit that templates consist of a few boundary and process heuristics that help govern and control initial experience. Finally, we show that while useful for seeding initial experience, templates are often flawed in fundamental ways.

This study also brings to the forefront the role of abstraction in enabling improvisation. Because of their deep underlying knowledge base, abstract heuristics can serve as improvisational referents (Miner, Bassoff, & Moorman, 2001). As improvisation is not simply composing something out of nothing, abstract heuristics act as guiding themes around which activity evolves. In jazz these themes may take the form of pre-composed phrases or a sequence of harmonic chords (Weick, 1998) while in organizations they may take the form of abstract country, customer, or product heuristics. For example, after its first two country entries into Sweden and Norway, executives at Alta raised the level of abstraction in the firm's country rule from "restrict business to Scandinavia" to "restrict business to Europe." By creating a more abstract country rule, management was able to remain focused on opportunities within Europe, yet improvise the country in which those opportunities could take place. This allowed managers to quickly respond to serendipitous opportunities to enter France, the U.K., and Germany.

Surprisingly, this study revealed little support for several other learning mechanisms such as experimentation. Experimentation refers to controlled situations that organizations use to test causal propositions and create new knowledge (Cook & Campbell, 1979). While past research also points to experimentation as central in the role of learning (Edmondson, Bohmer, & Pisano, 2001; Gibson & Vermeulen, 2003), its absence in this study may in part reflect that acquisition of new knowledge was not

leaders' main task during internationalization. In other words, where the focus of experimentation is to deliberately vary inputs in order to create new generalizable knowledge, the focus of many entrepreneurial firms is to get problems solved in order to take advantage of unique opportunities faster and more effectively than the competition.

Overall, this study reveals that executives' ability to learn from heterogeneous experience is only partly shaped by well-known learning mechanisms. This finding helps lead to a more refined and accurate description of how capabilities come to exist than that obtained by simply averaging over different learning mechanisms (i.e., learning curve assumptions). Most important, this study shows the importance of a blend of learning approaches. Specifically, it shows that learning from heterogeneous experience appears to be less a function of one particularly grooved learning mechanism and more the result from the successful interplay of several. This finding is consistent with theories of cognitive development that describe how cognitive processes work together, rather than in isolation, to generate cognitive growth (Siegler, Deloache, & Eisenberg, 2003).

Links to capabilities, rules, and routines

This work adds to research on capabilities. For example, much research suggests that capabilities are vague and idiosyncratic processes that are efficiently leveraged in order to create advantage (Priem & Butler, 2001a, 2001b; Williamson, 1999). In contrast, these data show capabilities relate to specific organizational processes such as internationalization. Data also shows that capabilities consist of particular types of heuristics including those about how to perform a task (e.g., which customers to target, which products to push, and what sales approach to follow), as well as heuristics about when to perform the task (e.g., pacing and sequence). So, while the details of any

capability may be unique to a particular firm (e.g., which sales approach to follow or which customer to target), the underlying structure is strikingly similar across many. These content similarities imply that capabilities are equifinal, that is, managers can develop them from different starting points and along different evolutionary paths (Eisenhardt & Martin, 2000). They also imply that capabilities are more homogeneous than what is described in the extant literature.

This work also suggests an expanded view of rules. Traditionally, research describes how rules evolve to become more complex over time (Cyert & March, 1963; Nelson & Winter, 1982). For example, Pisano (1994) described how manufacturing knowledge in the chemical industry became more refined, detailed, and robust through experience. While some heuristics in our study did become more complex, many remained purposely simple. Examples of such simple heuristics include Alta's "enter countries through acquisition," Block's "begin in English speaking markets first," Crest's "send in an aggressive young Finn to open new countries," or Echo's "always use partners." Data shows that these simple heuristics provided executives behavioral shortcuts that generally improved speed in thought processes and enabled improvisation. Such a view is consistent with research in cognitive psychology that shows how reliance on rough heuristics saves time and effort in decision-making since people do not need to consider all possible scenarios before action (Eysenck & Keane, 1995).

Finally, this study adds to research on routines. Prior research shows that routines evolve from incremental adjustments to path dependent activities based on accumulating experience and low levels of intentionality (e.g., Dosi, Nelson, & Winter, 2000; Nelson & Winter, 1982). Under this view, learning develops in slow minor ways, building upon

what has been started in the past (Haunschild & Sullivan, 2002; Johanson & Vahlne, 1977). Chang (1995), for example, found that routines for internationalization in Japanese electronics firms tended to evolve incrementally starting with initial investment in a foreign country and then gradually moving to further investment in an orderly fashion. In contrast, data in this study revealed a different pattern. Adjustments to routines were often uneven and lumpy, not just incremental.

Intentionality and path creation also appeared critical. So while path dependence is important, executives were also deliberately creating their own path. They were proactively creating new sets of routines and altering existing sets of routines in ways that intentionally moved them away from their heritage of the past. One leader remarked, “It was only the experience that we gained from this one person that made us think or showed us that the U.S. is a different market and that we need to do something differently.” Taken together, these observations point to a richer conception of learning that goes beyond the usual view of complex processes that evolve through incremental adjustments to include ones that are simple and that evolve non-incrementally.

Is this strategy?

Are these findings strategy? Like most good answers in the field of strategy, we believe that the answer to this question is that it depends. On the one hand, if strategy is viewed in a Porterian sense (1980) such as creating a generic strategy (e.g., low cost or differentiated position) in order to beat the competition, then what we found is not strategy. Likewise, if strategy is viewed under a resource-based lens where leaders win in their industry by leveraging valuable, rare, inimitable, or non-substitutable resources (Barney, 1991), like a skill in optics, to enter related product markets, such as cameras,

photocopiers, etc. (Helfat, 1997; Helfat & Raubitschek, 2000) then what we found is also not strategy.

On the other hand, if strategy is viewed more broadly, such as being different in a competitively advantageous way, then what we found is strategy. This is because the collections of rules developed in each firm to manage the internationalization process are unique choices, not best practices, about what to do (and not) in order to achieve success. Thus, at a more general level, the results of this study help get at the heart of what strategy is really about. More specifically, they suggest that strategy for young firms in dynamic markets is about creating a small, but constantly evolving set of unique rules for key processes that shape how to capture opportunity.

CONCLUSION

This paper explores learning, and more specifically, how organizations learn from their internationalization experience. The rationale is that organization research has devoted much attention to exploring if firms learn from their experience, but much less attention on how this learning takes place. Specifically, this study shows that learning begins not by pure “doing”, but with cognitive templates that managers create before any doing occurs. Learning further progresses as executives gain greater insights about how to accomplish a key process, as well as when and where to do it. Finally, learning continues to cumulate as organizational behavior evolves to become less, not more, routine with experience. If the insights from this inductive study are empirically substantiated, then they will extend our theories beyond a static conception of learning to a more dynamic and empirically valid view that emphasizes ongoing organic change.

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Table 1: Description of Cases

Company	HQ country	Year founded	Year of first entry	Entries as of 2003	Actual country entries (in order)		2003 sales	2003 empl.	Interviews	Avg. age of founding team	Informants
Crest	Finland	2000	2000	5	Sweden U.S.	Czech Republic Germany U.K.	\$9.3M	75	5	26	Co-founder and CEO Co-founder/VP V.P. of Operations VP of Business Dev.
Alta	Finland	1997	1999	6	Sweden Norway France	Germany U.K. U.S.	\$93M	495	6	48	Founder and Chairman Deputy CEO VP Marketing VP Sales Regional manager
Block	U.S.	1996	1999	5	Australia U.K. France	Germany Korea	\$8.5M	65	5	45	Chairman VP International VP Partner Solutions Country manager
Center	U.S.	1999	2001	5	China Taiwan Korea	Japan Germany	\$1M	100	4	60	CEO and Founder VP Marketing Country manager
Grand	Singapore	2000	2000	6	Taiwan U.S. Malaysia	Japan China Philippines	\$1.8M	55	6	32	CEO and President Founder and Director VP Strategic Operations Director Business Dev
Echo	Singapore	2000	2000	5	Hong Kong Malaysia	Japan China Saudi Arabia	\$3.2M	100	4	43	Founder and CEO General manager Country manager

**Table 2:
Echo's Heuristics for Internationalization**

Prior to internationalization	#1 Hong Kong (2Q 2000)	#2 Malaysia (1Q 2001)	# 3 Japan (4Q 2001)	# 4 China (Q1 2003)	# 5 Saudi Arabia (Q4 2003)
<ul style="list-style-type: none"> ■Stay Asia focused ■Target government and financial institutions ■Push 24x7 security monitoring ■Use partnerships (legitimacy especially around trust) ■Focus sales on the IT group ■Focus sales on features approach ■Work towards China 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target government and financial institutions ■Push 24x7 security monitoring ■Use partnerships (legitimacy especially around trust) ■ Focus sales on the audit group ■Focus sales on consultative approach ■Work towards China ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Work towards China ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Work towards China ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay China focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay China focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one

Table 3: Cognitive Templates

Company	Cognitive Template	Quotes
Crest	<p>Country</p> <ul style="list-style-type: none"> • Countries with lots of pharmaceutical activity <p>Customer</p> <ul style="list-style-type: none"> • Pharmaceutical companies <p>Product</p> <ul style="list-style-type: none"> • Electronic diaries <p>Sales</p> <ul style="list-style-type: none"> • Cold calling by young Finn with a phone book 	<p>“Since we started our operations in Finland, where there’s very little, if any, pharmaceutical companies operating, internationalization has been a necessity for our strategy and for our success from day one.”</p>
Alta	<p>Country</p> <ul style="list-style-type: none"> • Restrict business to Scandinavia <p>Customer</p> <ul style="list-style-type: none"> • Retailers <p>Product</p> <ul style="list-style-type: none"> • Enterprise software <p>Entry</p> <ul style="list-style-type: none"> • Use acquisitions to gain new technologies and enter new countries <p>Sales</p> <ul style="list-style-type: none"> • Focus on three items: reducing stock, controlling inventory, and improving replenishment process 	<p>“I remember when all these analysts were blaming us that we are too conservative because the markets are in the US. So we started with Sweden, which is closest here. I said that we have to have the learning process.”</p> <p>“From the very first day, I understood what retailers’ problems were and knew our software could support them.”</p> <p>“Our idea was first of all to buy the new technology.”</p>
Block	<p>Country</p> <ul style="list-style-type: none"> • English speaking markets <p>Customer</p> <ul style="list-style-type: none"> • Large enterprises that were struggling with their ability to handle vast amount of data and to make sensible decisions <p>Product</p> <ul style="list-style-type: none"> • Enterprise software to enable real time analytics <p>Sales</p> <ul style="list-style-type: none"> • Features selling approach that highlighted detail and functions of technology 	<p>“We had already decided that we were going to attack the English-speaking markets first. That was a no-brainer.”</p>
Center	<p>Country</p> <ul style="list-style-type: none"> • Tier-two and tier-three countries <p>Customer</p> <ul style="list-style-type: none"> • Large original device manufacturers (ODMs) or original equipment manufacturers (OEMs) <p>Product</p> <ul style="list-style-type: none"> • Semiconductor <p>Entry</p> <ul style="list-style-type: none"> • Use consultant to provide insight about local market and develop our relationships with distributors <p>Sales</p> <ul style="list-style-type: none"> • Leverage successful track record of CEO to mitigate against being a start-up • Direct sales if country culture is known 	<p>“We are following the same strategy that the CEO did with his previous company... We have a chip that enables a new cost point for GPS navigation and smart-phones.”</p>
Grand	<p>Country</p> <ul style="list-style-type: none"> • Asia <p>Customer</p> <ul style="list-style-type: none"> • Large manufacturing suppliers <p>Entry</p> <ul style="list-style-type: none"> • Use partners to bridge liabilities of newness 	<p>“As part of strategy planning right in the beginning, we realized that we are a small company ... We realized from the start that it’s going to be crucial to our strategy to start working with the big boys.”</p>
Echo	<p>Country</p> <ul style="list-style-type: none"> • Asia <p>Customer</p> <ul style="list-style-type: none"> • Government and financial institutions <p>Product</p> <ul style="list-style-type: none"> • 24x7 security service monitoring <p>Entry</p> <ul style="list-style-type: none"> • Use partnerships to enter new countries <p>Sales</p> <ul style="list-style-type: none"> • Target the IT group within organizations • Focus on the technology angle (ie., features and functions) 	<p>“From my understanding of the market from the beginning, it was info-security. Look at who cherishes the information more... That one we predicted would happened and it happened.”</p> <p>“When I started, I immediately started in Singapore and Hong Kong because from those two cities you can cover North Asia and South Asia.”</p>

Table 4: Unexpected Errors in Cognitive Templates

Company	Country	#	Error	Change to cognitive template
Crest	Czech Republic	3	Country Entered Czech Republic	<ul style="list-style-type: none"> • Countries need to be the HQ of big pharma companies and not just have pharma activity • Qualify customers with set of basic budget related questions • “We learned how to really know whether the client is buying or not and whether they are serious and they are having the budget to buy or not.”
	Czech Republic	3	Customer Czech Republic customers couldn't pay for services	
Alta	Norway	2	Country Entered Norway	<ul style="list-style-type: none"> • Do not to enter countries that are too small • “The Norway market is really small, so it's not our strategy to be there ourselves.”
Block	Australia	1	Sales Pushed direct sales approach	<ul style="list-style-type: none"> • Do indirect sales with distributor in non-strategic countries
Center	China	1	Product Mobile device didn't work	<ul style="list-style-type: none"> • Create converge mobile device based on original product failure • “The advantage of this initial failure is that in this process, we developed digital camera technology, we developed MP3 technology, we developed voice-over-IP technology. On the second-generation processor, we took all that DSP code and immediately had head-and-shoulder advantage against the competition who developed all that stuff from ground up.”
Grand	Taiwan	1	Country Couldn't sell in Taiwan without U.S. presence	<ul style="list-style-type: none"> • Enter the U.S. before entering other Asian countries in order to get needed credibility • “That helped shape our idea of our entry into the U.S. because they would say, ‘I won't do it until my big customer in the U.S. tells me to do it.’” • Target large MNCs or their manufacturing suppliers
	U.S.	2	Customer Target was too narrowly defined	
Echo	Hong Kong	1	Sales Targeted wrong group	<ul style="list-style-type: none"> • Target the audit group within enterprises instead of the IT group • “There are a lot of organizations, including banks, which have transitioned from info-security under IT to now, now info-security under the audit group.” • Focus on value (i.e., consultative selling) rather than just emphasizing the functionality and features of technology • “It is also more consultative selling, meaning that it is not “hey this is a very good technology and I can analyze the log for you.” I am looking at it more from the risk management angle.”
	Hong Kong	1	Sales Features selling approach was ineffective	

Table 5: Elaboration

Company	Country/ Countries	#	Original rule	Elaboration	Country	#
Crest	Sweden, US, Czech Rep.	1-3	Entry Send in one young aggressive Finn to oversee host country operations	Entry Send in one young aggressive Finn <i>who speaks local language</i> to oversee host country operations	Germany	4
	Sweden	1	Communication Active communication among HQ and country employees through intranet or email lists	Communication Active communication among HQ and country employees through intranet or email lists <i>and through weekly meetings where all country managers participate to better serve local customers</i>	U.S.	2
Alta	Prior	0	Entry Enter countries through acquisition	Entry When making an acquisition <i>ensure that target's management is 100 percent committed to the deal</i>	Sweden	1
				Entry When making an acquisition <i>do extensive due diligence</i> and ensure that target's management is 100 percent committed to the deal	France	3
				Entry When making an acquisition do extensive due diligence, ensure that target's management is 100 percent committed to the deal, <i>and invest in post-acquisition integration</i>	Germany	4
Block	Australia	1	Sales Promote features and functions of technology	Sales Promote features and functions of technology <i>except when using distributors</i>	Australia	1
Center	China	1	Sales Leverage successful track record of CEO	Sales Leverage successful track record of CEO, <i>highlight numerous tech certifications, and describe strong relationships with other industry players</i>	Taiwan	2
	China	1	Entry Use consultant to provide intros and insight about local market	Entry Use consultant <i>and prototypical large customer</i> to provide intros and insight about local market	Japan	4
	China	1	Sales Direct sales in the country culture is known	Sales Direct sales in the country culture is known, <i>indirect if it is not</i>	Korea	3
Grand	U.S.	2	Entry Create a business case for entry	Entry Create a business case for entry <i>detailing market size, readiness for technology, and potential partners</i>	Malaysia	3
Echo	Hong Kong	1	Sales Target auditors instead of IT	Sales Target auditors instead of IT and <i>segment customers into platinum, gold, or silver accounts</i>	Malaysia	2
	Hong Kong	1	Entry Build partnerships based primarily on trust	Entry Build partnerships based primarily on trust <i>and ability to manage unique business environments</i>	Japan	3

Table 6: Temporal heuristics

Company	Country	#	Dimension	Quotes
Crest	Prior	0	Destination U.S.	“We believe that pharma is global, and U.S. driven. So we need to be U.S. driven and global as well.” “First you need to get a couple of small deals because you need to provide local references...then go out and get one of the big guys.”
	Sweden	1	Pacing Begin in easy markets to get experience	
	U.S.	2	Sequence Move from small reference accounts to top 20 pharma references	
	Germany	4	Pacing Create success in major pharma markets (e.g., U.S. and Germany) before entering smaller markets (e.g., Japan)	
Alta	Prior	0	Destination Working towards the global wholesalers in largest retail markets	“Make success in Europe, now it’s time for the U.S., and at the same time we are starting to research China.” “If the U.S. is going as planned, then we start in China...If it comes slower, then China comes later.”
	Sweden	1	Sequence Build up professionalism in large European retail markets to help provide references and legitimacy for larger U.S. customers.	
	Germany	4	Pacing Take one continent at a time based on progress	
	U.S.	6	Pacing Pull out if no success after three years	
Block	U.K.	2	Pacing Build up enough strength in core markets before further high cost commitment to internationalization	“We felt that we should build up much more serious bench strength in the U.K. first before moving to France.”
Center	Prior	0	Destination Tier-one countries	“So our marketing strategy has been trying to get the credible players from the tier-two, tier-three countries...then you leverage that to get into the tier-one in Japan, Germany, and North America.”
	China	1	Sequence Move from tier-three to tier-two to tier-one countries	
	China	1	Pacing Become leading semiconductor firm for mobile devices in three years	
	Germany	5	Pacing Pace new chip features according to one-year design cycle	
Grand	Prior	0	Destination Japan	“We’ve always been eying the Japanese market.” “The Japanese buyers won’t buy unless the American buyer’s buy. There’s this whole pecking order of nations.”
	Taiwan	1	Sequence Use U.S. as a reference to sell back into bigger Asian markets like Japan	
	U.S.	2	Pacing Pace entry according to market readiness and resources	
Echo	Prior	0	Destination China	“Hong Kong is the stepping stone into China and Taiwan.” “Start in one country, make it work, and then replicate...make investment by stages.”
	Hong Kong	1	Sequence Use Hong Kong as a springboard to enter larger future markets such as China and Taiwan	
	Hong Kong	1	Pacing Focus efforts on one country, see how it plays out, and then move to next one	

Table 7: Shifting Levels of Abstraction

Company	Country	#	Shift in level	Rationale
Crest	U.S.	2	Lower abstraction of customer rule From all pharma to top 20 pharma customers	<ul style="list-style-type: none"> Industry controlled by big pharma
	U.S.	2	Raise abstraction of hiring rule From hiring local salespeople based on online resources to ensuring strong hires	<ul style="list-style-type: none"> Needed to create a way to access stronger local talent
Alta	France	3	Lower abstraction of customer rule Target grocery segment of retail markets	<ul style="list-style-type: none"> Could exploit a particular segment in a large market
	France	3	Raise abstraction of country rule From original focus on Scandinavia to Europe	<ul style="list-style-type: none"> Wanted to pursue larger customer deals
	U.S.	6	Raise abstraction of country rule From Europe to world's largest retail markets	
Block	Korea	5	Raise abstraction of country rule From original country target of "English speaking markets" to low cost opportunities to generate revenue	<ul style="list-style-type: none"> Opened chances to pursue serendipitous revenue enhancing opportunities with distributors in foreign countries without large upfront commitment of capital
Center	Korea	3	Lower abstraction of customer rule Target automotive segment	<ul style="list-style-type: none"> Could hone skills in particular segment of the market
	Germany	5	Raise abstraction of product rule From PDAs, cell phones, and automotive GPS to mobile device that is biggest and least competitive	<ul style="list-style-type: none"> Created flexibility to quickly enter specific un-entrenched market niches
Grand	Taiwan	1	Lower abstraction of country rule Target countries promoting RosettaNet standards	<ul style="list-style-type: none"> Association with standards body added legitimacy to fledgling firm
	U.S.	2	Raise abstraction of entry heuristics From few specific partnership structures to larger combinations of types	<ul style="list-style-type: none"> Created opportunities to work with U.S. firms in range of unique partnership arrangements
Echo	Hong Kong	1	Lower abstraction of country rule Focus on China	<ul style="list-style-type: none"> Wanted to take advantage of large emerging market
	Malaysia	2	Raise abstraction of product rule From 24x7 security service monitoring to security systems integration	<ul style="list-style-type: none"> Needed other info-security services for underdeveloped infrastructure of country
	Malaysia	2	Raise abstraction of customer rule From government and banks to large organizations with proprietary information and ability to pay	<ul style="list-style-type: none"> Not able to access government customers

**Table 8:
Echo's Heuristics for Internationalization**

Prior to internationalization	#1 Hong Kong (2Q 2000)	#2 Malaysia (1Q 2001)	# 3 Japan (4Q 2001)	# 4 China (Q1 2003)	# 5 Saudi Arabia (Q4 2003)
<ul style="list-style-type: none"> ■STAY ASIA FOCUSED ■TARGET GOVERNMENT AND FINANCIAL INSTITUTIONS ■PUSH 24X7 SECURITY MONITORING ■USE PARTNERSHIPS (LEGITIMACY ESPECIALLY AROUND TRUST) ■FOCUS SALES ON THE IT GROUP ■FOCUS SALES ON FEATURES APPROACH ■<i>Work towards China</i> 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target government and financial institutions ■Push 24x7 security monitoring ■Use partnerships (legitimacy especially around trust) ■ Focus sales on the sales group (audit group) ■Focus sales on features approach (consultative approach) ■Work towards China ■<i>Use Hong Kong as a springboard to enter larger future markets</i> ■<i>Focus efforts on one country, see how it works, and then move to next one</i> 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust) ■Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Work towards China ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay Asia focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Work towards China ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay China focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one 	<ul style="list-style-type: none"> ■Stay China focused ■Target large organizations with proprietary information and the ability to pay ■Push security systems integration ■Use partnerships (legitimacy especially around trust, plus money and specifics of business environment) ■ Focus sales on the audit group and characterize customers as platinum, gold, or silver ■Focus sales on consultative approach ■Use Hong Kong as a springboard to enter larger future markets ■Focus efforts on one country, see how it works, and then move to next one