THE ONE-TRILLION DOLLAR GLOBAL TALENT GAP: WHAT IT IS, AND WHAT WE CAN DO ABOUT IT

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EXECUTIVE SUMMARY

This Working Paper reports on three years of wide-ranging and detailed research into the multiple intersections of corporate strategy, technology, content and talent in firms across the U.S. economy.

In brief, we discovered the single greatest competitive challenge companies face today is recruiting enough of a new kind of talent currently undersupplied by the market, and the costs of undersupply are large and growing. A Boston Consulting Group survey of 1,000 executives found their most serious concern is the gap between the talents their companies have, and the talents they need, with "76 percent of leaders ranking this challenge as important, while only 18 percent felt prepared for it, especially competencies in the emergent digital space." And McKinsey estimates that talent gaps cost on the order of $800 billion to $1 trillion annually, in just four sectors of the U.S. economy. This is a big problem with widespread implications for innovation, growth and global competitiveness.

This study identified five distinct talent attributes through face-to-face interviews with 75 senior executives in multiple sectors around the U.S., and subsequent analyses of a Korn-Ferry data base of 1,887 executives. We developed a unique model of Third Space Talents and Third Space Thinking quite distinct from the talents and orientations of engineering and traditional business executives. The individual communication-based talents encompass *Adaptability, 360 Degree Thinking, Cultural Competence, Empathy* and *Intellectual Curiosity*. The mix of these necessary talents evolves over a career trajectory. Together they constitute a new way of strategic thinking for collaboration, innovation and enhanced performance. Closing the gap requires better collaboration between companies and universities. The following illustrations present our core findings.

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OVERVIEW

Technological convergence, demographic transformations, economic disruption, political uncertainty and the inexorable spread of globalization are creating unprecedented needs for new talent in organizations throughout all sectors of the contemporary economy. Whether they work in the public, private, university or non-profit sector, senior executives are trying desperately to carve new paths for themselves and their organizations as they move into an uncertain future.

Sophisticated analysts and professionals in the public and private sector, as well as in institutions of higher education, are recognizing that their own ability to move their organizations forward is heavily dependent on decisions made by skilled people, sometimes in other sectors. Private companies depend on talented engineers and MBAs to design, build and market new products, and they need smart economists to make long-term investments in new platforms and applications. Government officials need nuanced regulatory policies based on intelligent models, and require data and studies created by able analysts. But engineers, MBAs and analysts can't always innovate or make good decisions on their own.

At the same time, faculty committees are designing courses that their students will need to take their place in tomorrow's workforce. Without clear identification of the new kinds of talent that organizations now and will increasingly require, and in the absence of enhanced communication and collaboration among companies, government, and colleges and universities, transitions to the new economy will be well below everyone's ambitions.

This working paper reports on three years of wide-ranging and detailed research into the multiple intersections of strategy, technology, content and talent. It reflects USC-Annenberg School of Communication and Journalism (ASCJ)'s curiosity as a

school that trains future media professionals, and our concerns as scholars and teachers who are responsible for fulfilling the multiple needs for 21st-century talent. Our ability to fulfill this need intelligently and strategically hinges on our understanding of the world about us. While this study is still a work in progress, we believe we have made good progress in unraveling a highly problematic issue.

Our research thus far is divided into four main phases. First, we conducted face-to-face conversations with 75 senior executives in multiple sectors.[i] With Phase One completed, we then tested our original findings against a much larger sample in order to confirm or disconfirm Phase One results. Phase Two analyzed a database of another 1,847 executives in engineering, business and communication, which we describe below. Some of our findings conformed to contemporary professional expectations about the intersections of strategy, technology, content and talent. Others came as a surprise to all of us.

75
"Connector Conversations"

1,847
Korn-Ferry "PROFILOR" Scores

60
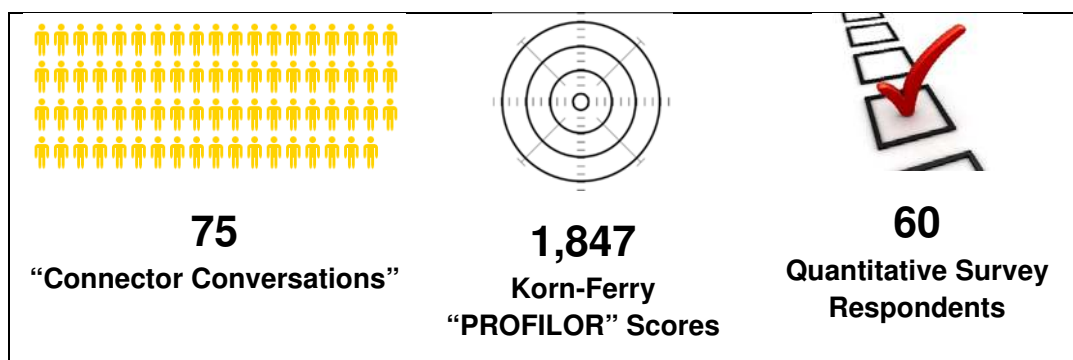**Quantitative Survey Respondents**

Exhibit 1: The Third Space Research Process

Phase Three is the current review and discussion of this document at the Forum on November 7, 2014, at the USC Annenberg School in Los Angeles. Phase Four will move from description to prescription, building on Phases 1 through 3 and proposing concrete activities designed to fulfill the need for new talent.

At this time, we actively encourage readers to help us improve this work. This paper constitutes the first two phases of what we are confident will be a longer-term project. We have worked with some of the most thoughtful, generative and innovative people in multiple sectors and industries across four continents; we welcome comments, criticism and collaboration as we move forward. We are confident this initiative will continue to be exciting and helpful in the years to come. We look forward to communicating with you, as we seek to build a community of interest to find innovative solutions to the global talent gap.

Research Phase One: Identifying Specific Talent Needs

We began modestly, by holding conversations with corporate executives around the country, primarily in media, communication and entertainment (MCE) companies, then expanding to other sectors. Eventually we would engage face-to-face with 75 senior people in the marketing, advertising, and public relations functions in the automobile, banking, consulting, consumer products and services, technology, and other industries. We then expanded our research to capture additional quantitative data with online surveys.[ii]

Our earliest findings were also deeply informed by engagement with other academics, especially through our co-leadership of the Study Group on Communication Policy and Public Affairs, convened by the prestigious Social Science Research Council, (SSRC), the leading organization of its type in the U.S. USC Annenberg was also an active participant in the Carnegie-Knight Commission on the Future of Journalism Education. Participants included colleagues from the London School of Economics, Stanford University, Columbia University, the University of Pennsylvania, the Universities of Michigan and Illinois, as well as Google, MTV, Booz & Co. and others.

This initial phase of our research allowed us to go into great depth and nuance with the respondents, and to explore different lines of analysis. These extraordinarily cooperative executives in New York, Los Angeles, Palo Alto, Seattle, Shanghai, Beijing and London provided the original insights, examples and narratives that eventually led us to formulate the fundamental conceptual and strategic framework that guides this paper – what we call the "Third Space" as described below.

> *Our first research question asked the executives to identify their companies'*
>
> *biggest problem – was it capital, technology, regulatory issues,*
>
> *labor, or another challenge?*

It quickly emerged that talent was by far the most crucial issue. Without talent, companies cannot innovate; without innovation, there can be no growth. On the upside, much is to be gained from talent-driven innovation, including global competitiveness and better jobs. The Boston Consulting Group's study of 1,000 executives found that the gap between the talents they have, and the talents they need, is their most serious concern.

Overall, 76 percent of leaders ranked this challenge as important, while only 18 percent felt prepared for it. They were especially worried about competencies in the emergent digital space.[iii]

We then concentrated on the following questions:

> 1. *When you hire people, what kind of talent are you seeking?*
> 2. *When you promote them, what competencies are you looking for?*
> 3. *Why do you need these skills now?*
> 4. *What can universities do better to prepare people with the talent you seek?*

We understood that stakes in today's war for talent are high. Having the right or wrong talent will affect performance at all levels, from the national economy, to particular companies, to the success of individuals.

At the national level, according to the McKinsey Global Institute (MGI), the costs of failing to align company talent resources with strategies, including efforts to capture the benefits of new technologies at all points along the value chain -- from upstream ideation and prototyping, to market research, production and sales -- are easily on the order of $800 billion to $1 trillion annually, in just four sectors of the US economy.[iv]

Third Space Talents make a difference at the individual level as well. Workers entering the workforce with the skills – and modes of thinking – that we identify will have a very different trajectory over the course of their careers than those who do not. This will affect the positions they hold, their life time earnings, job satisfaction and the opportunities of their children. These talents will also shape their orientation and capacities as leaders, as we discuss below.

What is The Third Space?

Our original 75 respondents told us repeatedly that, beyond conventional business and engineering training, their companies needed additional essential talents that are now undersupplied by the market. Beyond the traditional skills typically provided by business and engineering, our respondents came, as a group, to describe was what we came to call a "Third Space" populated by essential "softer" skills provided by neither engineering nor business training:
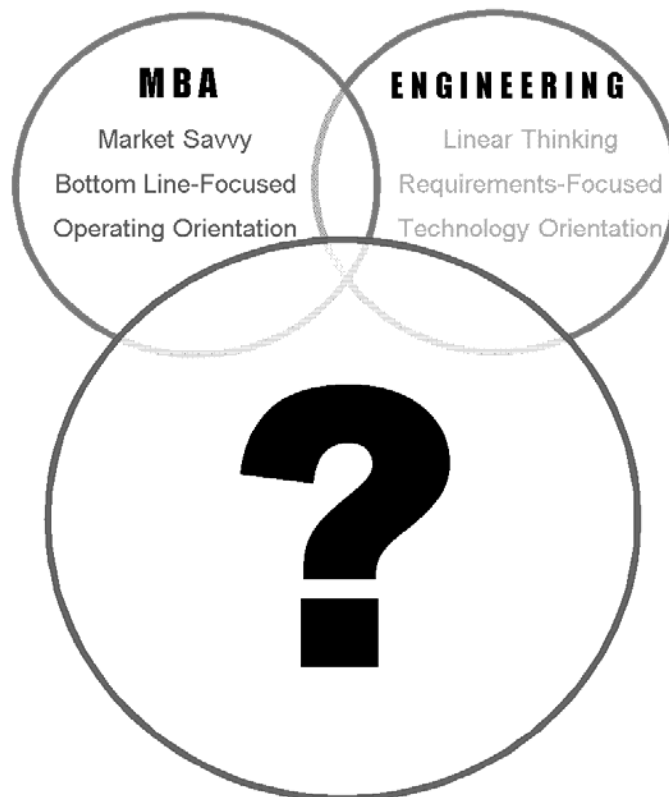
Diagram 1: The Third Space

The lack of people with these nebulous "Third Space" skills was the executives' greatest concern. In our quantitative work, we found that the vast majority -- 90 percent of our survey respondents -- reported that a shortage of talent possessing sufficient soft-skill competencies was having an impact on their organization.

Here are the core competencies or talents that we identified from the Phase One research:

Table 1: The T-5 "Help Wanted"	
ADAPTABILITY	*Demonstrate mental agility and resilience in ambiguous situations; be flexible when handling change and less likely to rely on stale legacy solutions. Happily think beyond black-and-white to the gray areas, and ask expansive, unexpected questions that lead to better solutions.*
360-DEGREE THINKING	*Think holistically – be capable of seeing the big picture, recognize patterns, and make imaginative leaps based on those patterns.*
INTELLECTUAL CURIOSITY	*Have a deep hunger to learn and grow. Show a desire to dig deep – to be creative and willing to risk and experiment in order to learn.*
CULTURAL COMPETENCE	*Have a capacity to think, act and move across multiple boundaries of functions, silos and global cultures, including the sometimes insular worlds of engineering, law, and business.*
EMPATHY	*Demonstrate strong emotional intelligence as well as effective listening and collaboration skills. Have superior communication skills. Be smart, ambitious, yet humble enough to be inclusive and consider the views of others across a variety of disciplines, cultures and perspectives.*

Illustration 1: The Third Space Competencies

The lack of enough people with these specific "Third Space" skills, respondents told us, had affected not just the strategic communications function itself, but the overall effectiveness of organizations of all sizes, in all industries, and in all functions. According to these individuals, this shortage of Third Space Talent (which we abbreviate henceforth as "TST") is causing myriad bad outcomes including poor internal communications, managerial inefficiency, and slow responsiveness to change. These issues were further supported by our own Third Space online survey, which yielded the following results:

**Table 2: Reported Impact of TST Talent Shortage
on Organization Performance**[v]

Poor internal communications (75%)

Managerial/operating inefficiencies (61%)

Sluggish response to critical changes in their industry or environment (61%)

Insufficient innovation (59%)

Ineffective in executing key strategic initiatives (55%)

Missing critical opportunities for growth (52%)

Poor communication with external stakeholders (45%)

While just over half of our survey respondents were unable to estimate the monetary impact of a TST talent shortage on their organization, 20 percent indicated the impact was less than $1 million annually; 12 percent considered the annual impact to be between $1 million to $5 million; and a nearly equal number (11 percent) calculated the annual impact to be $10 million or greater**[vi]**

Beyond Talent: Third Space Thinking

The awareness of a demand side shortage of "soft" skills is not new, and we do not claim so.[vii] What is new, however, is the greater sense of urgency being expressed by more people in multiple industries as businesses start to recognize the material effects of inaction on closing the gap. The formulation we offer here recognizes this urgency, but also describes its impacts and costs, considers talent supply as well as demand, and conveys the talent gap explicitly, in an action-oriented way.

As so often is the case, *The Economist* got it right some time ago. In 2008, The Economist Intelligence Unit wrote about the "Struggle for Tomorrow's Workforce".[viii] It reported that the "projected shortages vary from function to function," with about 30 percent of survey respondents saying that graduate science and engineering skills need to be improved by schools and universities:

> *"More pressing than the need for technical skills is the demand for employees able to make use of softer management skills and techniques. Over two thirds of executives in the survey (68 percent) [i.e. twice as many who emphasized science and engineering] believe that the ability to manage change will be critical to their organization's success over the next three years. The capacity to think strategically, to communicate effectively with people, as well as to analyze and problem-solve, are also highly sought after skills by executives…"*

And nearly half of respondents in *The Economist's* study reported that these skills (would) be "extremely difficult to source over the next three years."

There is an important distinction between "Third Space *Talents*" on the one hand, and "Third Space *Thinking*" on the other. Individual talents are beneficial for anyone – any place, anytime. Like improving one's serve or backhand in tennis, or learning to conjugate irregular verbs in Spanish, developing single attributes can enhance overall performance. More powerful is the ability to draw on Third Space Thinking as a complement to "engineering thinking," "MBA thinking" or thinking like an economist. We recognized a superior level of conceptual sophistication and strategic quality in those who possess quite different ways of seeing and interpreting the world, and who have different ways of framing, prioritizing and acting on issues. The most sophisticated people can "code switch" back and forth between their hard and soft sides, and are capable of integrating the two to yield both power and subtlety in their thinking. These are, by far, the most valuable executives.

The following is a perfect example of someone who has learned to acquire the individual talents, and to integrate them into a special way of thinking:

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Third Space Thinker: Ben Edwards
Vice President of Global Digital Marketing, IBM

Adaptability and lifelong learning are crucial rules for Ben Edwards. Formerly IBM's chief communications officer, he's now responsible for the giant company's advertising, media, performance marketing, brand strategy, and experience design. He is also the founder of its Marketing Innovation Group [see IBM's Marketing Innovation Lab, page 13], where people from a variety of disciplines work on projects together.

Working as a foreign correspondent for The Economist after graduating from college, Edwards spent his 20s traveling all over the world. He wrote articles on global financial markets and financial flows, post-Soviet Russia, and the so-called "end of history," and he grew up fast. Eventually he transferred his writing skills to corporate communications, where he became a speechwriter for IBM's former CEO Sam Palmisano.

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Soon the tug-of-war for his desirable skills began. Within a few years, The Economist seduced him back to run their digital business, tasked with building the publication's website and advertising network. IBM then raised the ante, hiring Edwards back to run the digital innovation group. "I put together a bunch of digital teams inside corporate marketing and helped to found our innovation model," he says, "That model has since begun to move from the periphery of IBM to the center."

What makes Edwards the epitome of the Third Space occupant is not only his flexibility and ability to traverse boundaries, but his restless intellectual curiosity. A writer by training, he is learning to code in several languages, not just to better communicate with software engineers, but also because he understands the well-turned phrase is a shrinking part of the communication experience.

"The most important skill now in communications is being able to design interactive experiences," he says. "To do that well, you need to bring writers, designers and engineers into a collaborative partnership. Learning to code has helped me understand how to synthesize these diverse minds into amazing creative outcomes."

"This learning piece is crucial," he says. "It is the cornerstone of the needed mindset in companies now. More and more, companies are looking for people who have a thirst to learn. If you can leap across from left to right brain, and vice-versa, you are the best hire of all."

The Common Denominator: Communication Skills

People with in-demand TST attributes share a critical common feature -- they are all deeply informed by fundamental communication competencies. Communication lives at the core of each of these distinct attributes considered individually.

Third Space Company: IBM's Marketing Innovation Lab

One company that has gone out of its way to locate, hire and nurture people with Third Space traits and inject them into an environment where they can make a difference is IBM. Like all big companies, IBM has many "hard-skilled," linear-thinking experts in operations, but relatively few people who exhibit the broader T-5 competencies.

To leverage the skills of those with demonstrated T-5 skills and to enhance collaboration and communication between people in marketing and other constituencies across the company, like R&D and sales, IBM has set up its Marketing Innovation Group.

The group manages a portfolio of internal start-ups that use enterprise data and platforms to develop new technology services and digital experiences. Broad categories in the lab portfolio include web and mobile application development, digital marketing services development and digital experience innovation (including sales engagement and employee engagement).

Working side by side in the IBM Studios are 250 writers, interaction designers, user experience professionals, developers, graphic designers and others.

People who work in the group are trained in lean start up techniques and the Agile method of product development, which Ben Edwards, IBM's VP of Global Digital Marketing, learned to use when running the digital media business at The Economist. (Applying something that is used in one context to another is a hallmark of the Third Space Thinker, and Edwards' application of the Agile (software development) methodology to marketing projects is absolutely unique.)

A descendent of lean manufacturing methodology, Agile is an empirical method emphasizing short cycles of planning and execution that teams use to learn their way towards solving problems. This collaborative methodology has provided a model for cross-functional teamwork. "It becomes a way to bridge how we work together as marketers and technologists," says Edwards.

IBM screens prospects carefully to ensure that they have the intellectual curiosity and enterprising nature to be successful in the Marketing Innovation Group, and then offers classes and workshops in the methodology. "Those who succeed are very valuable for us," says Jon Iwata, IBM's Senior Vice President, Marketing and Communications. "I just wish we had more of these people."

At its heart, communication is about the interactive, multidirectional exchange of messages. To understand this process well, the talents of empathy, cultural competence, 360-degree thinking, pattern recognition and collaboration are essential. These are talents that rest solidly on one's capacity to take in and interpret information, not just to send it.

Each of these attributes are communicative in their very nature. (The attributes can be also stated as an assemblage of skills, attitudes, knowledge and experiences.) Beyond the communicative nature of the five individual TST attributes, the capacity to link them into a collective, aggregated "Super-Talent" is also a feature of effective "communication thinking." Communication thinking is therefore a higher-order attribute than just possessing one or two individual talents. It is the capacity to frame issues in a particularly distinctive way wherein communication is at the core. As mediated communication moves more to the center of society, communication-based thinking should move more toward the center of our thinking. We elaborate on the core concepts of the field of communication below.

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Third Space Thinker: Justin Prugh
Senior Inbound Marketing Consultant, Hubspot

Justin Prugh chose to major in advertising at the University of Colorado because he liked the harmony between creativity, collaboration and writing. He also loved inspiring others to take action through his words and ideas.

Early in his post-college career, Prugh faced the proverbial fork in the road. One path would lead him into account management, another path into creative advertising. It was an easy decision for him. "Account management felt administrative and practical," he says, "and I wanted my job to be fun, independent and flexible."

As a senior inbound marketing consultant at HubSpot - a Boston-based, inbound marketing company that has built a social media platform to help tens of thousands of businesses to effectively connect and attract new customers – [see page 17] – Prugh is

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always looking for ways that he can take initiative and think creatively to help make his company stronger. He loves the pattern recognition and cross-fertilization that is part and parcel of his work. "If you know what people in your company are working on, and can connect that work to upcoming goals, then you have a handle on how you can support them and vice-versa," he says.

"At HubSpot, customers who graduate from our consulting program are asked to complete a survey. I knew ahead of time these surveys were going out, so I reached out to the person who oversees the program and I volunteered to optimize the survey. With my background in market research, I knew that I could help them make the survey better, so it would yield more actionable data."

When considering the Third Space, he doesn't see skills or abilities -- he sees people. "A lot of my friends and colleagues embody these attributes," he says. "I find it is core to who they are." And he believes that companies will achieve greater success if they focus on hiring more Millennials with Third Space talent.

Research Phase Two: Confirming Data Hypotheses

After we designed this TST model from our initial Phase One qualitative research, the team developed explicit hypotheses to confirm or disconfirm the model. In Phase Two, we were able to partner with Korn-Ferry, the largest executive search firm in the world. Their team opened the company's huge database to us, and collaborated closely with our team to pose relevant TST questions that their data could answer. This provided our project with a much larger executive sample, thereby allowing us to combine qualitative and quantitative information to test our initial conclusions across a larger universe of respondents, especially gaining access to a much broader range of professional backgrounds.

In addition, we designed and deployed our own questionnaire, adding supplementary questions that were missing or underdeveloped in Phase One.

In the transition from Phase One to Two, we focused our research questions more narrowly and formulated the following explicit research hypotheses:

Exhibit 2: Hypotheses of The Third Space Research

Hypothesis #1:

Competency differences will vary systematically across the three talent spaces (business, communication and engineering)

Hypothesis #2:

People who work in the communication space will have more Third Space talents than their counterparts in engineering and business.

Hypothesis #3:

The specific talents will differ over a career path, with some relatively more valuable earlier or later in a career.

Hypothesis #4:

None of the three core areas, including communication, are adequately meeting the urgent new talent needs.

Third Space Company: Hubspot

At the marketing and sales software firm HubSpot, finding and cultivating Third Space Talent is essential to its success. The company's culture code requires that people who work for HubSpot have HEART, which stands for: Humble, Effective, Adaptable, Remarkable and Transparent. Unknowingly, HubSpot accurately identifies people who embody Third Space traits.

Those with HEART are endowed with specific soft skills that complement their areas of expertise – even individuals who will tackle the more technical jobs like software developers are expected to possess these skills -- which include being self-aware; respectful; sharing credit when things go well; taking responsibility when things go wrong; being predisposed to action; having a sense of ownership; being resourceful; being a life-long learner, curious and constantly changing; being open and honest with themselves and others; and being willing to share knowledge and data easily with colleagues.

HubSpot finds talent by taking an unconventional approach to the interview process. Instead of asking candidates about their backgrounds based on resumes and having them take aptitude tests, HubSpot managers ask questions designed to reveal things about a person's character and personality.

Questions like "what types of books do you like to read?" are asked to see if someone is curious and loves to learn. And situations are presented -- like a door being left a crack open -- to test whether someone will walk in and show their assertiveness, or whether they'll wait until being asked to come in.

 HubSpot is so serious and committed to hiring the right people that Shah says it's reportedly harder to get a job at HubSpot than it is to get into MIT. "The interview process at Hubspot was very grueling," says Justin Prugh (see his profile page 14).

HubSpot also offers an open workspace to foster collaboration and has people rotate desks every three months to reduce office politics and help people connect to colleagues. And people are encouraged to use social media, like Twitter, Facebook, and the company's own Wiki page, especially to connect with colleagues so everyone can see what everyone is working on.

HubSpot has benefited tremendously from recruiting and nurturing Third Space talent. Since 2008, the company has grown from $2 million in revenue to $77.6 million in 2013 , and now has almost 700 employees in offices in Boston and Dublin, Ireland.

Phase Two Research Findings

What did the evidence tell us about the four hypotheses? In brief, the first three were confirmed. We discuss each briefly in turn, and then introduce the illustration that sums up the data.

Hypothesis #1

Cross Field Variance: Confirmed

We found that competency differences did indeed vary systematically across the three talent spaces. The findings from our initial qualitative interviews were supported in Korn-Ferry's larger data sets, particularly from its "PROFILOR" instrument .

Hypothesis #2

Greater TST Attributes in the Communication Function: Confirmed

Professionals in public relations, advertising and other communication functions scored highest on TST. The robust results from the Korn-Ferry data, confirming our two core original interview hypotheses, are powerfully revealed in the following illustrations. Drawn from their database of more than 6,000 individuals, this instrument measures individuals' mean scores in four specific types of "agility," or what they call "Agility Profiles."[ix]

From this "PROFILOR" database, we asked the lead researchers at Korn-Ferry to re-analyze their data according to specific corporate functions -- engineers, core business executives, and communications executives (with sample sizes of 462, 1,240 and 145, respectively). The teams from Korn-Ferry and Annenberg also identified analogs for our five TST talents (T-5) with the PROFILOR descriptors.

MBA Profile

The Champion

Like the hero in a classic tale, individuals fitting this profile have a flair for saving the day in grand style. They can achieve results with a combination of intense drive and resourcefulness. At the same time, they allow others to shine as well and can handle difficult situations with humor and grace. Their focus tends to be more outward than inward, so they don't always invest the time to carefully scrutinize situations or make the connections that elude others. Champions tend to perform best when someone else generates the breakthrough thinking and then gives them the opportunity to deliver the results.

Engineering Profile

The Pillar

Accomplished conductors of organizational activities, individuals in this category lead with a harmonious blend of insightful thinking, focused action, and an open, inclusive manner. In partnership with others, they will put considerable effort into crafting and implementing highly refined solutions. The Pillar's focus is more on improvement than change, on making the gears turn a little smoother instead of building a new machine. This may sometimes leave them vulnerable in circumstances that call for a radical shift in thinking and require experimenting with brand-new approaches. They need to concentrate on staying ahead of the curve so today's solutions don't become outmoded.

Communicator Profile

Mental ... **People**

Results ... **Change**

100 95 90   75 67   50

The Diplomat

When the stakes are high and the situation calls for supreme people skills, these are the individuals you want to be at the forefront. Deft at sizing up others and adjusting their style to fit the moment, individuals in this category can calmly navigate diverse, difficult people situations. Cool-headed and committed to seeing things through, they can be both diplomatic and results-focused. While skilled at handling crisis situations and keeping things calm and focused, the Diplomat's impact may be less in situations where a jolt of innovative thinking and inspiration is required to get people energized and acting differently.

Source: Korn-Ferry 2014

The results showed that "communicators" had higher mean scores in specific competencies, including adaptability, defined as "comfort working effectively in ambiguous situations and responding resourcefully to new demands and challenges." Communicators also scored higher in potential proxies for T-5 competencies in empathy and collaboration, including: empowering others; promoting collaboration; inspiring trust and establishing open, candid relationships; careful listening skills, and encouraging others to express contrary views.

According to the Korn-Ferry PROFILOR data, those in the communications function showed higher agility scores than those in engineering and "pure" core business functions, making them more likely to have TST.[x] Thus our second hypothesis was also confirmed.

Third Space Thinker: Elisa Schreiber
Vice President of Marketing, Greylock Partners

From her perch at the center of Silicon Valley, Elisa Schreiber has a wide view of what the next Mark Zuckerbergs of the world are up to. As vice president of marketing for one of the most successful and respected venture capital firms in the technology world, Greylock Partners, her job is to help entrepreneurs with their marketing efforts, and to manage all marketing activities for the firm. Before that, she ran global communications for Hulu, where she launched Hulu Plus, the fastest-growing online video subscription service in U.S. history, which grew to more than 5 million paid subscribers during her tenure there.

TED fans can also thank Elisa for TEDx, which she helped found when she was running marketing and communications for the USC Stevens Institute for Innovation, where she also advised early-stage start-up companies.

"Having strong creative and writing skills helped me in the first twelve years of my career, but I realized that I had a blind spot around operations, economics and business, so I went for an MBA to round out my fluency in those areas," she says. This combined "soft-hard" background has equipped her beautifully for her role at Greylock.

From her perspective as a marketing expert for tech startups, Schreiber has much to say about what companies and colleges can do to better prepare young people to fill the critical need for "Third Space Thinkers:" "If we agree that the Third Space is about developing people who bring a fluency in technology, economics, and design to their jobs, then universities need to inspire and nurture this breed of talent by making sure such people get the training they need. The major research universities that offer innovative curriculum to support this talent evolution will become the center of the ecosystem for corporations and students."

Specifically, Schreiber notes, communications professionals today also need to understand how their decisions can affect the company's bottom line, and the mechanics of how their business operates. "With this kind of working vocabulary," she says, "people beginning their careers are much more interesting candidates."

Table 3: Communications Executives' Scores Exceeded Business or Engineering Professionals' in Korn-Ferry's PROFILOR Instrument
o *Inspiring Trust*
o *Leadership Versatility*
o *Global Perspective*
o *Attracting and Developing Talent*
o *Empowering Others*
o *Driving for Stakeholder Success*
o *Cross-functional Capability*
o *Entrepreneurial Risk-Taking*

Results from Korn-Ferry's LOMINGER VOICES assessment also indicated that Communicators had statistically significant mean score advantages in characteristics that also might be considered proxies for 360-degree thinking, contextualization and pattern recognition, including "creating the new and different" and "making complex decisions," as well as higher mean scores in openness and receptivity (indicators of adaptability), and in relating skills, which could align with empathy and collaboration.

Hypothesis #3

TST Attributes Vary Over Time: Confirmed

We could neither confirm nor deny this hypothesis using our original interviews. However, we were able to evaluate and confirm them it via a separate instrument we constructed drawing on a population of about 60 individuals, the majority of whom worked in marketing, communications-related or executive management functions in large organizations in a variety of industries.

The T-5 capabilities are valuable at all points in a career, but our initial survey results indicate some attributes that appear to be more valued at different stages within one's career. Furthermore, there seems to be a systematic shortage of certain skills at the senior end of the career pipeline, and these differ from those in early to mid-level positions.

Table 4: Top-Ranked Most Critical, Most Lacking TST Competencies by Employee Level				
	Recent Graduates	**Entry-Level Individuals**	**Mid-Level / Managerial**	**Senior Executives**
Ranked "Most CRITICAL"	*Intellectual Curiosity / Creativity & Willingness to Experiment*	*Intellectual Curiosity / Creativity & Willingness to Experiment*	*Adaptability / Flexibility & Comfort With Ambiguity*	*360º Thinking / Contextualization / Pattern Recognition*
Ranked "Most LACKING"	*360º Thinking / Contextualization / Pattern Recognition*	*360º Thinking / Contextualization / Pattern Recognition*	*Adaptability / Flexibility & Comfort With Ambiguity AND* *Empathy/Effective Listening & Collaboration Skills (TIE)*	*Empathy/Effective Listening & Collaboration Skills*

For example, "Intellectual Curiosity/Creativity and Willingness to Experiment" were top-ranked as the "most critical" for recent graduates and entry-level individuals, while "360º Thinking/Contextualization/Pattern Recognition" was considered "most critical" for senior executives. For the TST competencies considered "most lacking," consistent deficiencies were perceived among recent graduates and entry-level individuals, and among mid-level managerial and senior executives.

Respondents indicated that "Adaptability/Flexibility" and "Comfort with Ambiguity" were considered both "most critical" and "most lacking" among mid-level managers.

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Third Space Thinker: Keith Yamashita
Chairman, SY Partners

Keith Yamashita believes there are many factors that make for a person who works in the Third Space —natural proclivities, opportunities to flex them, parents who champion them, schools that value them, early career experiences that bring them out," he says. "In my case, I think I was born with some of these traits."

Today, Yamashita is the chairman of SYPartners— a consultancy he founded in 1994 dedicated to helping individuals, teams, and companies do groundbreaking work. [See the sidebar "SYPartners" on page 26]. Yamashita is also an author, essayist, and a television correspondent on the topics of leadership, design, and culture. A born systems thinker and creative leader, Yamashita is the quintessential Third Space inhabitant. For him, having challenging work, with no easy answers, is crucially important. He also places a high premium on empathy and aspiration in the workplace, something he has tried to build into the culture of his company.

With a university background in both design and econometrics, he began his career working at Apple, and then with Steve Jobs at NeXT. "I think there are a lot of creative people who are probably not very disciplined, and what I learned from Steve was that you select things very carefully based on what you can be extraordinary at," he says.

"You concentrate on that one thing you can do and if you can do a second thing well, then you do two things. But if doing a third thing means that you have to compromise in the first two, don't do it. And second lesson from Steve: once you pick what you are going to be extraordinary at, reserve your right to send work back because it's not good enough. These two principles affect how I lead. I really try to focus on the areas where we can make the most difference."

Yamashita firmly believes that for companies, new value creation lies at the intersections between functions. "The ideas that succeed will rise up from orthogonal thinking that goes beyond process-refinement of what is, and instead puts forth a new vision for what could and should rightfully be. This," he concludes, "is going to require a new kind of thinking and new kind of leadership."

</div>

Respondents to our online survey were asked to consider whether they perceived particular T-5 competencies in recent job candidates who might have graduated from a program like USC Annenberg (Communications, Media, Journalism or PR).

They indicated that these young candidates were most likely to demonstrate the T-5 competency they considered the most critical for all recent graduates/entry-level employees: "Intellectual Curiosity/Creativity & Willingness to Experiment." These young job seekers also were perceived to be lacking in "360º Thinking / Contextualization/Pattern Recognition."

Table 5: T-5 Competency Perceived As Most Apparent & Most Lacking in Recent Communications/Journalism Graduates[xi]	
T-5 Competency MOST APPARENT in New Graduates	*Intellectual Curiosity / Creativity & Willingness to Experiment*
T-5 Competency MOST LACKING in New Graduates	*360º Thinking / Contextualization / Pattern Recognition*

The criticality of creativity, whether in communications executives specifically or in leaders overall, was further supported in a May 2010 article in *Fast Company* that reported that 60 global CEOs considered creativity as "the most important leadership capability over the next five years."[xii] (In subsequent research, it will be worth exploring at least two complementary groups of creative people – those who are creative and talented in areas such as music, games, software and other substantive areas, and those who are creative in "professional" areas who are good at process innovation, including production, marketing and distribution.)

Interestingly, the Third Space survey respondents indicated their belief that the best means of developing the two T-5 competencies they considered most critical was through university-based education.

Third Space Company: SY Partners

As industries blur, as boundaries between professions grow more inter-related, as companies are finding even their most proven approaches no longer reaping results, the need for Third Space thinkers has created a significant opportunity for the New York-based consultancy SYPartners.

SYPartners has worked with Apple, Nike, Citibank, GAP, Starbucks, Johnson & Johnson, Target, General Electric, eBay, IBM and others on their business strategy, culture change, leadership development, product and service offerings and more.

Much of the work has to do with bridging functions. "Often our clients come to us not because they don't have the talent they need in house, but because they don't have a method of working to activate this talent," says co-founder and chairman Keith Yamashita (see his profile on page 24), "whether that's to drive the creation of a new kind of innovation, launch a new division, radically change the business model, or reimagine the institution itself."

Since challenging assumptions and seeing things from new perspectives is what SYPartners does best, the company goes out of its way to hire people from a wide variety of backgrounds –in fact, says Yamashita, the people who do well in SYPartners' selection process are unusually expansive in their interests and expertise and don't often fit tidily into more traditional roles.

Employees are particularly good at non-linear, orthogonal thinking, and they include MBAs with undergraduate degrees in art; industrial designers with international finance degrees; Ph.D. psychologists; sociologists with hard-core economics backgrounds; poets and people with medieval literature degrees; and so forth.

Many team members grew up outside the United States. Everyone is steeped in the principles of design thinking: "It's a great pragmatic shared language of how to apply new ways of thinking to hard problems," Yamashita says.

> *Yamashita believes that the best way to build creative Third Space leaders is by giving them a repeated set of assignments where the goal is specifically to challenge the status quo.*
>
> *"Whether the assignment is formal or informal, small scale or large scale, the key thing is to focus on challenging current assumptions. It can be a formal development program, a business assignment, or temporary projects—it really depends more on the culture of the company as to what will work best. And the earlier this can happen in a young leader's career, the better."*

Do executives consider whether their current staff or team members are demonstrating these T-5 competencies? In our survey, a majority reported seeing all of the T-5 competencies demonstrated with relatively high frequency by their respective team/staff.

That figure dropped, however, to 38 percent for "360º Thinking / Contextualization / Pattern Recognition." A large majority of respondents considered this competency as their team or staff's greatest need and development opportunity, as indicated on the following page.

Table 6: Survey Respondents' Views of Their Team/Staff's T-5 Competency Strengths, Development Needs[xiii]		
	Viewed as "Most Apparent / Strength"	Viewed as "Most Needed / Development Opportunity"
Adaptability / Flexibility & Comfort With Ambiguity	**54%**	**35%**
Capable of 360° Thinking / Contextualization / Pattern Recognition	**21%**	**73%**
Intellectual Curiosity / Creativity & Willingness to Experiment	**60%**	**33%**
Cultural Competence	**62%**	**33%**
Empathy / Effective Listening & Collaboration Skills	**58%**	**38%**

Hypothesis #4

The Academy is Failing to Supply Sufficient TST: Confirmed, but Ambiguous

This hypothesis is difficult to rigorously confirm since it depends on the independent subjective judgments of many people across multiple industries, as well as the opinion of academics. We did find dissatisfaction with TST preparation expressed by scholars and practitioners in the business, engineering and communication disciplines.

The discussion below of the "supply side" of the TST labor market describes some of these concerns. The extent of that dissatisfaction can be explored in follow up research. Further work is necessary to suggest ways to close the gap, within and across the fields.

Education and Training: Are Universities Out of Step?

Having described the demand side dynamics of the talent gap, we turn to the supply side. We concentrate on formal higher education provided to many of the people moving into the three higher education spaces of engineering, business and communication.

So far, the evidence is mute on what causes the cross-field differences we observe. Are they the result of personality and self-recruitment? Higher education? Or perhaps professional experience? We assume that some significant share of the difference reflects education. The attention private sector leaders devote to improving education, from K-12 through graduate education, certainly suggests they believe education plays an important role.[xiv]

Research conducted by the prestigious National Academy of Engineering (NAE) suggests that soft skills are increasingly important, even in those pursuing scientific or technical fields.[xv]

Responses to NAE's survey question, "In your view, which of the following are the most important ways that schools and universities in your country should strive to improve the curriculum?" yielded the following results:

Exhibit 4: Recommended Curriculum Improvements to Engineering Education
(source: National Academy of Engineering)
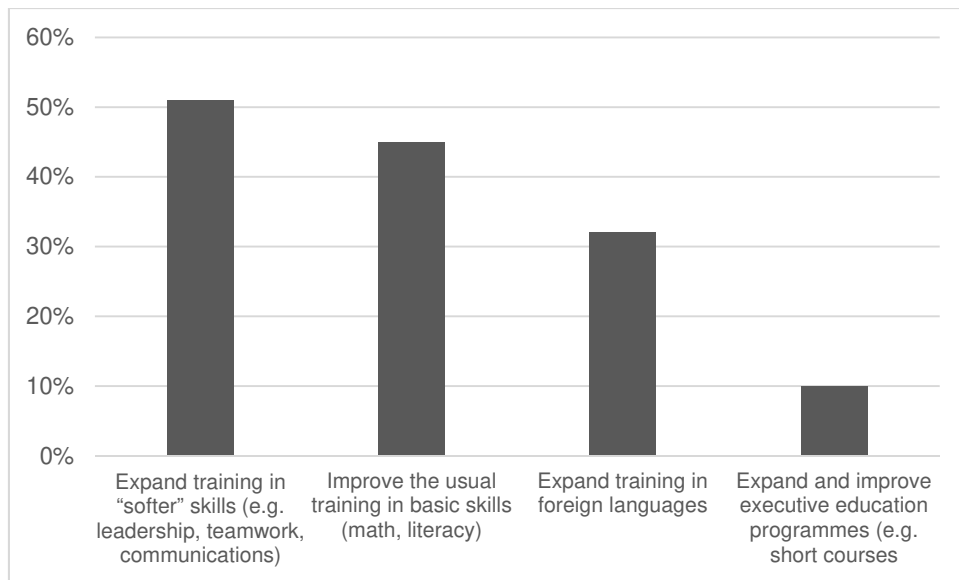
In Phase One of our Third Space research, we were told repeatedly that the skills companies need today go well beyond what business and engineering are currently providing[xvi]. While both are highly valuable, neither regularly nor reliably provides the new talent sets the executives we spoke to were seeking. Columnist Tom Friedman put it succinctly in a series he wrote on getting jobs in the new digital, global environment: "Your degree is not a proxy for your ability to do any job. The world only cares about – and pays off on – what you can do with what you know (it doesn't care how you learned it). And *in an age when innovation is increasingly a group endeavor, it also cares a lot about soft skills – leadership, humility, collaboration, adaptability and loving to learn and re-learn. This will be true no matter where you work."[xvii]*

We should repeat that our research does not allow us to claim that higher education has more influence than, say, incentives and disincentives in the work environment. Employees respond to rewards provided them by the organization for which they work.[xviii]

If, however, we assume that professional education has some significant impact on subsequent performance, then the Korn-Ferry PROFILOR data demonstrating that professionals in engineering and business have lower mean scores in specific agilities, which we consider proxies for Third Space competencies, suggests that educational institutions focusing on those disciplines may not be doing an adequate job of preparing their students for the new conditions of our distributed, digital global world. The PROFILOR data showed that communications professionals possess higher agility scores and presumably more TST; perhaps something in their education gives then an advantage in acquiring them. Before we examine training and education in communication field, a word about the other two.

Engineering Education. In engineering education, the lack of what we would consider Third Space competencies has been noted[xix] and partly addressed from within the profession itself. The NAE reported this year (2014)[xx] that engineering schools are wrestling with how to provide more complementary "soft skill" competencies in communication and collaboration, to wit:

> *The strong emphasis on technical knowledge and skills, and resulting improvements in defense-related technologies and applications, served the United States well during the war and postwar years, but, by the 1980s, economic shifts from defense to commercial applications left engineering employers dissatisfied. New graduates were technically well prepared but lacked the professional skills for success in a competitive, innovative, global marketplace. Employers complained that new hires had poor communication and teamwork skills and did not appreciate the social and nontechnical influences on engineering solutions and quality processes."*

But some progress has been made. According to the NAE, there has been progress in providing more soft skills, although the achievements are still lagging behind.

The differences over the past decade "were in five areas: awareness of societal and global issues… awareness of ethics and professionalism, group skills and applying engineering skills." The NAE further noted that:

> *Three of four employers assessed graduates' teamwork and communication skills as at least adequate. Moreover, these employers reported modest improvements in the past decade in teamwork and communication skills, as well as in the ability to learn and adapt to changing technologies and society. … However, barely half of employers found the understanding of organizational, cultural, and environmental contexts and constraints to be adequate. Moreover, skills in this area, according to employers, appeared to have declined somewhat over the past decade.*

Business Education. The internal critiques within engineering education and especially those who hire engineers are even more salient for business schools and business practices.[xxi]

Like law schools, business schools have become the target of substantial internal critiques over the past several years[xxii], especially since the financial meltdown when well-placed, well-paid and highly-trained business school graduates missed emergent trends, misunderstood (or deliberately overlooked) cultural conditions embedded in markets, did not display empathy and certainly missed the big picture.[xxiii] In other words, those trained in traditional business practices did not demonstrate the attributes our interviewees said they sought.

A major critique in the literature is also ethical failures. A number of business executives de-valued the ethical and the broader societal implications for technical trading, for example.

An article in the *New York Times* soon after the 2008 economic crisis noted:

> *Critics of business education have many complaints. Some say the schools have become too scientific, too detached from real-world issues. Others say students are taught to come up with hasty solutions to complicated problems. Another group contends that schools give students a limited and distorted view of their role — that they graduate with a focus on maximizing shareholder value and only a limited understanding of ethical and social considerations essential to business leadership.[xxiv]*

Many business schools have taught the softer skills in areas like leadership and management. University-based writers like Jeff Dyer, Hal Gregersen and Clayton Christensen, among others, have made seminal contributions to what we call Third Space Thinking from their positions within business schools.[xxv] And certainly our samples did not gainsay the value of business experience. Nonetheless, very few – if any – of the executives we interviewed told us that the traditional skills provided by business schools solved their talent problems.

Communication Education.[xxvi] In contrast to business and engineering, communication is the least known discipline.[xxvii] This area of study is newer and smaller, an amalgam of different traditions (humanities, social sciences, rhetoric, cultural studies) and a wide range of empirical foci (from technology to the structure of media industries, to gender and to media impacts).

Because the field as a whole is less well known than business and engineering, and because we found that some of its core theoretical and conceptual precepts are consonant with the highly-sought Third Space Talents, we will review core communication attributes in more depth than the other two.

(At first blush, one would think that communication would be the star discipline. And it is true that the number of students going into communication (and media and entertainment) is rising. But there are two sides to this coin, as we will see.)

The field of communication, according to the author, has five core precepts[xxviii]:

1. Communication problematizes the distinctions and relations among sender, message, channel, context and receiver. The message intended and sent may not be the message received, since the "same" message is likely to be re-shaped by the channel (BBC broadcast, Twitter, and so on), by the societal context, and the age, religion or race of the receiver. Most other fields leave these matters inside the "black box" of assumptions, taken for granted.

2. In today's world where so much is changing, context is king. A word or an action in context "A" will mean something quite different in context "B".

3. Communication has a deep respect for the audience and its own interpretation and definitions of meaning, which in turn reflects and produces a normative commitment to listening to the voices of the voiceless, and an associated respect for popular culture.

4. The discipline promotes the study of a wide range of problems and topics at many levels of abstraction, from micro to meso to macro.

5. The field has a long-standing commitment to inter-disciplinarity.

Taken together, these elements provide a unique approach to the modern world not fully captured by other disciplines or fields. These elements, and the intellectual traditions and scholarly practices they reflect, can and should be more widely appreciated and used by scholars and practitioners to enhance their performance in today's distributed, digital and media-drenched societies. Communication as a field appreciates these.

The good news is that the study of communications yields an understanding of rich texture, respect for the changing nature of audiences, the problematic nature of simply sending a message, and close attention to culture in all its forms.[xxix]

The bad news is the flip side: the heterogeneity of approaches means that there is not a widely accepted fixed canon of core ideas in the field. It is much more an *a la carte* menu of ideas and methods than a *prix fixe*. Some communication professors will embrace Third Space Thinking; many will not, leaving the benefits uncertain for graduates of communication programs.

A second challenge is that much of communication has come out of rhetoric and humanities traditions; in contrast to business and engineering, there is not a long tradition of close cooperation in communication with communities of practice. Business schools work closely with businesses, from startups to big corporations. Medical schools collaborate with physicians. Professors at engineering schools often partner with their communities of practice in Silicon Valley. Such engagement, alas, is less likely with communication professors.

Some communication schools do teach some of the five talents companies claim to need. However, because the links between company and campus are thin and intermittent, there is less input from companies, government and NGOs about courses, programs, internships and the other formal and informal ties that should link them with communities of practice. University-based communication experts are not as often read, consulted nor recruited by their relevant practitioner communities. (Most tellingly, even the Federal Communications Commission has few if any communication graduates; in a recent conversation with a senior FCC official, he could not name a single one.**)**

In short, business and engineering schools have the ties to the outside world, but not the content; communication has the content, but not the ties.

The solution to the talent gap should be obvious to communication educators but, to realize this potential of communication, several things need to happen. First, they need to recognize their unique opportunity to contribute to the global talent supply. Second, they should move more boldly to shape the global debate around this issue. This requires greater intellectual ambition and professional engagement than we have seen so far. Next, communication experts must convince others that the discipline is more than just a tool chest of operational and tactical actions for "getting the message out" or "telling our story" via press release, social media or PowerPoint. There are useful courses and handbooks that teach communication as tools. Indeed, such courses are offered at business and engineering programs, as I know from my own experience at USC, but they remain for the most part at the level of simple tools, not well-developed and complementary ways of strategic thinking.

The most sophisticated insight is that communication –grounded in Third Space Thinking – is an alternative way of interpreting and framing all issues, quite distinct from thinking like an engineer or thinking like a business executive. In this sense, the discipline of communication is analogous to "design thinking."[xxx]

Beyond communication, educators as a whole are growing more concerned that their institutions are failing to teach students what they need to know for tomorrow's job markets.

According to a recent survey by Gallup and *Inside Higher Education*, nearly nine in 10 presidents said an emphasis on "critical thinking" skills and personal development is very important throughout college in order for graduates to get jobs. But only about 40 percent of the presidents think their own institution is very effective at proving students with those skills and that kind of development.[xxxi]

In addition to individual schools taking up the new "soft" talents agenda, a number of national bodies are doing the same. The Social Science Research Council is working with several leading communication schools to explore how curricular and research initiatives might be better informed (though not fully determined) by greater engagement with companies and other institutions like government and community groups. Similarly, the National Research Council hosts a company-campus-government study group (Government University Industry Research Roundtable) that has reviewed the skills pipeline in the context of reducing transaction costs among those sectors.[xxxii]
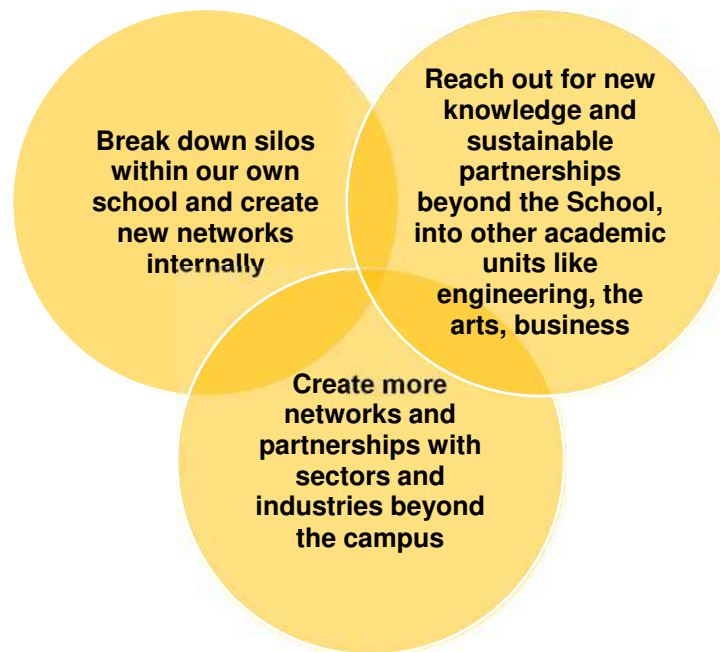
USC Annenberg Initiatives

Like communications and media companies, communications and media schools are responding in their own unique ways to the challenges and opportunities before them in the radically changed communication ecology. The heterogeneity of these schools teaching and research priorities – once again, in contrast to professional schools in engineering, or strong disciplinary programs like economics with widely accepted core competencies – leads to a wide diversity of responses. But the top-tier schools have all made interesting and serious efforts to innovate and evolve.

Annenberg's response to the disruptive conditions has been guided by the adage, "Innovate or Die," reinforced by the sense of urgency conveyed by stakeholders. Over the last five years, in order to create new knowledge and TST-empowered graduates, the School has created multiple new programs and reformed existing ones in teaching, research and service, with the common aim of breaking down silos, and experimenting with new forms of learning and doing.

These new initiatives are certainly not the only ways to seek and nourish talent; we simply offer them as concrete examples of multiple reforms pursued by one single

institution in order to meet the challenges and opportunities of the 21st century education and research.

Break down silos within our own school and create new networks internally

Reach out for new knowledge and sustainable partnerships beyond the School, into other academic units like engineering, the arts, business

Create more networks and partnerships with sectors and industries beyond the campus

**Exhibit 5:
Enhancing "The Annenberg Advantage:" Initiatives
by USC-Annenberg to Advance Third Space Thinking**

- The most unconventional new teaching program is Annenberg^X, a suite of offerings innovative in their content, teachers, incentives and even their location. Starting with just a handful of classes, they were designed to promote the values associated with Third Space Thinking.

  A highly successful example is "Leadership in Startup Media Ventures," taught by serial entrepreneur (and Tinder co-founder) Dinesh Moorjani. His guiding question is "What does it take to launch and lead your own startup?"

The two-credit course attracted a wide array of students from across the campus, meeting for seven intensive sessions rather than for a full semester, and pushed the boundaries of media and communications studies. Other courses met off campus, all designed to view the world through 360-degree lenses.

- Our external stakeholders complained that communication students didn't know enough economics and about the industries in which they wanted to work, claims corroborated by our longitudinal research. The "Media Economics and Entrepreneurship (M2E) initiative" www.m2e.uscannenberg.org) was co-launched by the former Los Angeles bureau chief of the *Wall Street Journal* and a Ph.D. colleague from USC Annenberg around a suite of courses intended to cultivate students' economic skills, substantive knowledge about media, and familiarity with economic logic. Reaching beyond the walls of Annenberg, M2E has become a University-wide minor in collaboration with the Marshall School of Business' Grieff Center on Entrepreneurship, with notable off-campus collaborators. Other cross-campus teaching programs align with the University's five arts schools, Engineering, and the new Iovine-Young Academy of Arts, Technology and the Business of Innovation. A proposed certificate with the Public Policy School is also on the drawing board.

- Other new USC Annenberg classes combine, for the first time, students from each of the school's main tracks – Journalism, Public Relations and Communication – so they may learn about the differences and overlaps among the disciplines from thoughtful professionals from the LA area as well as engaged University professors.

- At the graduate level, the Journalism School completely eliminated its Masters of Arts (MA) program and replaced it with a brand new 'Digital first" Masters of Science (MS) program

Research and Engagement

For a field marked by excessive insularity, perhaps the most radical innovation for the School of Communication and Journalism has been to aggressively partner with our external stakeholders.

Through the creation of a brand-new Annenberg Innovation Laboratory (AIL) (www.annenberglab.com) USC Annenberg forged a global networked community of common interest and formal partnerships with IBM; DemandTV; Disney; France Telecom; Havas; IBM; Jaguar; LA County Museum of Art; Microsoft; Verizon; Warner Bros., and others. School faculty and students work closely and regularly with executives and other experts on the multiple intersections of technology, content creation, business models, strategy and content development. Headlines can tell the story: *MarketWatch* wrote "The next Silicon Valley: USC Annenberg?"; *Forbes* ran a story titled "Innovation Lab: How To Create An American Renaissance."[xxxiii] Right across from the AIL is the LaunchPad entrepreneur center, sponsored by a $3 million grant from the Blackstone Foundation to attract students from business, engineering, and cinema as well as communication and journalism.

A new Institute for Diversity and Empowerment at Annenberg (IDEA) and our long-standing Metamorphosis community project teach students to understand and act on the multiple intersections of changing social demographics and emergent technologies. A half-dozen other centers and institutes partner with practitioners to teach students Cultural Competence, Empathy, 360-Degree Thinking, Adaptability and Intellectual Curiosity -- the Third Space attributes they will need to be successful in the new world of networks and digital realities.

The School also has invested more than $1 million to enhance its "school-to-work" pipeline, linking academic and career advising together. Working with our external stakeholders, this program designs intern and employment strategies for the students.

These programs and others are wrapped together in the new state-of-the-art $60 million Wallis Annenberg Hall, designed to promote innovative patterns of communication and collaboration across the former silos, with spaces designed to be connectors, not containers.

Beyond the campus, USC Annenberg has also significantly expanded its international partnerships across China, from Beijing to Shanghai and Nanjing, and taken on new projects with partners such as the London School of Economics, as well as promoted programs in Dubai, South Africa and Germany.

All of these new initiatives are designed to create platforms and safe spaces where one can take risks and disrupt, where the five competencies can be learned, and where Third Space Thinking can be applied to the changing world.

Third Space Thinker: Callie Schweitzer,
Editorial Director of Audience Strategy for TIME and TIME Inc.

Callie Schweitzer learned about innovation, digital media and entrepreneurism well before she graduated summa cum laude with a degree in print and digital journalism from the Annenberg School in 2011. She was the editor-in-chief of Neon Tommy (Annenberg's 24/7 online news site, which became the #1 most-trafficked online-only student publication in the country within a year of its launch in 2009.

She also served as a staff writer and the senior news editor and coordinated coverage for breaking news, day-to-day reporting and big events such as President Obama's visit to USC in October 2010, the midterm elections in November 2010 and the national education protests in March 2010.

"I was in school during the explosion of social media and digital storytelling, and I got to experiment with it every single day," she says. "I learned that there's no such thing as a student journalist and that age should never hold you back from asking important questions.

"My experience at Neon Tommy gave me an entrepreneurial hunger and interest in giving people news they don't know they need," says Schweitzer. "As a 20-year-old overseeing a staff of more than 200 people and running a publication being read by hundreds of thousands of people, I had to think holistically. How do we find more readers? How do we adapt to these new tools and tell better stories?"

After graduating, Schweitzer worked as the deputy publisher of Talking Points Memo, overseeing the business, publishing and tech side of the company. She subsequently directed marketing and communications at Vox Media, overseeing the branding, marketing, and audience growth for sports site SB Nation, tech/culture site The Verge, and gaming site Polygon.

Today, she is the Editorial Director of Audience Strategy for TIME and TIME Inc. where she oversees traffic, audience engagement, social media, newsletters, new product initiatives and content partnerships. "Working at Time Inc. has been a master class in learning from some of the world's best Third Space thinkers," she says. "We're reaching more than 50 million unique visitors per month and are doing for the minute what TIME has always done for the week. It's transformational, and I feel lucky to be part of it."

Beyond the Campus: Societal Perspective on the Talent Eco-System

Beyond the institutional rigidities of legacy academic disciplines, there are more fundamental realities that need to be addressed in order to begin shrinking the talent gap. In both innovative, cutting-edge digital industries in Silicon Valley, Seattle and beyond, and also in legacy ones like media or banking, the presence of women and people of color is well below their presence in society. The result is that while talent is very much in very short supply, employers are not pursuing all their available opportunities to recruit.

The gap is worsened when companies look in only the traditional places. Companies and other institutions tend to fish for their talent in too-familiar waters, seeking conventional talent. And for a variety of reasons, fields like engineering, finance and entertainment remain male-dominated, even when there are large percentages of women in undergraduate or graduate training (as in communications; 75 percent of USC-Annenberg students are female). Industry is, in general, as male-dominated as it was a quarter century ago, as demonstrated in the work of Annenberg Professor Stacy Smith.

The effect of these heavily-skewed patterns of education, industry participation and career advancement is to exclude 80 percent of the potential talent pool from serious consideration by talent-starved institutions. In this working paper, we won't go into detail of the complex underlying causes of this gap, but the results of network exclusion are likely to become increasingly clear in coming years through impacts on audiences and earnings, during a period when America is becoming more diverse, and as women control a growing share of the national disposable income. A *Harvard Business Review* article concludes that start-ups are more likely to perform better with a diverse team that brings complementary perspectives to problems; firms with homogeneous teams perform less well[xxxiv].

Conclusion, Topics for Further Study and Next Steps

This working paper has presented arguments and evidence about the demand for new kinds of talents, and the distribution of some of those talents across different professions – business, communication and engineering. We came away from our research efforts with one overriding conclusion: as the business world becomes increasingly complex, Third Space Thinking is much more important than a narrow understanding of business or engineering alone can provide, and broader than the field of communication as currently practiced.

The next step is to consider ways to respond to the gap between skyrocketing demand for talent and costly undersupply. Moving forward, we believe we need to pay more attention to the following issues:

Companies should ask themselves:
- *How should companies best recruit, reward and promote people with specialized TST skills?*
- *What does the new career track for TST experts [or Third Space Thinkers] look like?*
- *Where and how are Third Space people best deployed in line functions as connectors and collaborators?*

Universities should ask themselves:
- *What would a curriculum that develops Third Space Thinkers look like in detail -- from the unique perspectives of a restructured business curriculum, a communication curriculum and an engineering curriculum?*
- *How can the academic fields collaborate to develop TST-enhanced individual programs in their schools, and also to design collaborative and even joint programs?*
- *How would one measure the success or failure of new TST programs?*

Both communities need to ask:

- o *What corporate-campus mechanisms can be put into place to continue the discussion about TST pipelines and performance?*
- o *How does the diversity issue (gender, race, ethnicity and personal and professional backgrounds) affect the TST talent pool?*
- o *Should we broaden the discussion to include traditional definitions of creative talent, and how they are nourished or neglected inside today's organizations?*
- o *How does TST intersect with leadership?*

In the end, colleges and universities need to revise their curricula to create a steady supply of people with a combination of Third Space skills who can fill collaborative leadership roles immediately upon graduation. And companies need to work hard to locate, promote and retain these valuable workers, while assuring that they are not locked away in silos, but rather scattered throughout organizational functions where they can do the most good. Even if corporate managers and leaders lack Third Space skills themselves, they can surround themselves with those who have them and work to assure a balance of skills on their teams.

The immediate challenge is to foster opportunities for smart, sustainable communication between company and campus; in other words, to apply Third Space capabilities – Empathy, 360 Degree Thinking, Cultural Competence, Intellectual Curiosity and Adaptability – in addressing the talent gap of Third Space Thinking.

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The Roots of the Global Financial Crisis Are in Our Business Schools, Robert A. Giacalone and Donald T. Wargo, Journal of Business Ethics Education, 6:2010

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Little, Brown and Company, 2000)
The War for Talent: Myths and Realities, Korn/Ferry International 2008

The War For Talent, McKinsey Quarterly, 2001

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ENDNOTES

[i] Organizations participating in our face-to-face interviews included the following:

bgC3	Juniper Networks
Brand Strategist	Ketchum
Brunswick Group	LinkedIn
Burson-Marsteller	Microsoft
CBS News	MMB Media
Chevron	New York Times
Cisco	Next Fifteen
CMG	Publicis
Edelman	Sard Verbinnen
Fleishman Hillard	Sony
Genentech	Starbucks
Golin Harris	Time Inc.
Goodman Media Intl	Tivo
Google	Twitter
Hill & Knowlton	Visa
IBM	Warner Bros.
Intel	Weber Shandwick
Intentional Futures	Yahoo

[ii] Nearly 40 percent of Third Space Survey respondents worked in Advertising, Corporate Communications or Public Relations functions; 19 percent worked in General Managerial or Strategy/Business Development; 10 percent worked in Marketing, and 6 percent worked in Consulting. In terms of Industries, 15 percent were from Advertising/Marketing/PR; 16 percent were from education and/or nonprofits; 10 percent were from media; 8 percent were from government agencies; and 6 percent each were from the Airlines/Aerospace, Banking/Financial, Consulting Services, and Telecommunications/Technology/Electronics segments. In terms of organizational size, 55 percent of survey respondents indicated their organizations had annual revenues of more than $100 million. The survey was conducted online with Qualtrics software during May-August 2014 and used non-randomized snowball sampling recruitment.

[iii] *Game Changing – 50th Annual Global Executive Survey* Select Results Provided Compliments of Boston Consulting Group, January 2014

[iv] http://www.mckinsey.com/insights/high_tech_telecoms_internet/the_social_economy.

[v] Data on file, USC Annenberg

[vi] Data on file, USC Annenberg

[vii] Describing the Third Space Thinker has been an iterative process. A wide variety of writers and scholars, including Malcom Gladwell, Daniel Pink, Richard Florida, Roger Martin, Herminia Ibarra, Morten Hansen, Hal Gregersen, Jeff Dyer, and Frans Johansson, among others, have over the years tried to describe various of modes of thinking, soft skills and characteristics that we might also place in the realm of the "Third Space." (See Bibliography)

[viii] http://graphics.eiu.com/upload/SAP_talent.pdf

ix According to Korn-Ferry, "[i]ndividuals scoring in the upper ranges of learning agility (above the 67th percentile) were analyzed to see if strong patterns emerged. The results revealed that a relatively small number of patterns account for a significant portion of the sample."

x An issue that arose from time to time during our interviews is whether there is a leadership style associated with people who possess TST. In the Encyclopedia on Leadership [Burns, et al, eds] the author argues that different historical moments reward different leadership styles. While there are some common attributes of all leaders, the demands of today reward particular leadership attributes [Wilson quotation] It may also be the case that, as mentioned above in the discussion of the Korn-Ferry data, those in the communications functions may have developed specialized leadership attribute because of their structural positions in organizations (sometimes ambiguous), and their own experience and personalities.

xi Data on file, USC Annenberg

xii http://www.fastcompany.com/1648943/most-important-leadership-quality-ceos-creativity

xiii Data on file, USC Annenberg

xiv p. 10, EIU Report. Some companies recognize the need to improve the demand-supply links: 46 percent of respondents plan "to invest in supporting universities and schools to develop more curriculum" and less than 1/3 say already do to establish or improve training programs.

xv The Changing Face of Engineering Education," The Bridge, Summer 2006, published by the National Academy of Engineering
https://www.nae.edu/Publications/Bridge/ReformingEngineeringEducation/TheChangingFaceofEngineeringEducation.aspx

xvi Liberal arts did arise occasionally in our conversations, but not to the same extent as business and engineering. Many interlocutors called for stronger analytic and critical thinking in the people they hire. A surprising number also bemoaned weak writing skills that we expect the liberal arts to provide. Any initiative which we expect to enhance the quality of the workforce should certainly include the liberal arts.

xvii Thomas L. Friedman, "How to Get a Job at Google," NY Times, February 22, 2014

xviii Interviews with executives of Google and leaders with U.S. Department of State. Data on File, Annenberg

xix Rick Stephens, former senior VP of Human Resources and Administration at Boeing Company, has commented that "…although colleges and universities produce technically competent graduates who understand engineering concepts and demonstrate the ability to apply them in the real world, they often lack the people skills (also called 'soft' skills) that enable them to meet their full potential. Today's engineers need to be not only technically strong but also creative and able to work well in teams, communicate effectively, and create products that are useful in the 'real world'." (31) in The Bridge, Summer 2013, published by the National Academy of Engineering
http://www.nae.edu/File.aspx?id=88638

xx "The Changing Face of Engineering Education," The Bridge, Summer 2006, published by the National Academy of Engineering
https://www.nae.edu/Publications/Bridge/ReformingEngineeringEducation/TheChangingFaceofEngineeringEducation.aspx

> "The 1,622 employer respondents in the study represented a wide range of geographic locations, industry types, company size, educational attainment, and engineer-evaluation experience. The employer survey asked three primary questions.

As shown in Figure 7, more than 90 percent of employers thought new engineering graduates were adequately or well prepared to use math, science, and technical skills, and about eight of 10 gave recent graduates passing marks on their ability to solve problems and to learn, grow, and adapt. Three of four employers assessed graduates' teamwork and communication skills as at least adequate. Moreover, these employers reported modest improvements in the past decade in teamwork and communication skills, as well as in the ability to learn and adapt to changing technologies and society. Employers perceived no change in technical skills in math and science, but some noted a modest decline in problem-solving skills, although eight out of 10 still rated problem-solving skills as at least adequate. Barely half of employers, however, found the understanding of organizational, cultural, and environmental contexts and constraints to be adequate. Moreover, skills in this area, according to employers, appeared to have declined somewhat over."

[xxii] One well-known treatise on the topic is Harry Mintzberg's *Managers not MBAs: A Hard Look at the Soft Practice of Managing and Management Development* (2004), San Francisco: Bennett-Koehler, which emphasizes the need to move business education away from cold calculation and toward soft skills and better ethics. Another notable book on the topic is *Rethinking the MBA: Business Education at a Crossroads*, (2010) by Srikant M. Datar, David A. Garvin, Patrick Gerard Cullen (Boston: Harvard Business Press), in which the author argue that critical skills for modern business students include leadership skills (self-awareness, interpersonal skills and ethical development), learning how to act creatively and innovatively, and how to think clearly and communicate effectively.

[xxiii] Robert A. Giacalone and Donald T. Wargo "The Roots of the Global Financial Crisis Are in Our Business Schools". *Journal of Business Ethics Education*, 6 (2009) – Giacalone and Wargo, both business professors at Temple University, argue that the values taught in business schools, most problematically the primacy of shareholder value, are largely what led to the economic crisis, and that to fix this, schools must "teach values education" (161) and "commit to a culture of integrity" through "ethical community building" (164).

[xxiv] http://www.nytimes.com/2009/03/15/business/15school.html?pagewanted=all. See also the weeks-long online debate about the role of business schools in the collapse: http://blogs.hbr.org/2009/04/the-hbr-debate-end-of-round-1/. Subsequently, business schools, most notably Harvard Business School, began to readjust their curricula.

[xxv] *The Innovator's DNA*, Dyer Gregersen, Christiansen

[xxvi] Note that the field of communication (no letter 'S') is distinct from the phenomena of communications (with the letter 'S').

[xxvii] The broad purpose of our work at the ASCJ research is to enhance the teaching, research and service practices of higher education, in partnership with firms and other academic organizations, in order to enhance the supply of professionals with specialized communication-based talents. These are big strategic issues for all institution, including the USC-Annenberg school, with huge implications for setting budgets, hiring and promotion, and defining our specialized niche in a rapidly changing environment.

[xxviii] "Communication Scholars Need to Communicate", Ernest J. Wilson, *Inside Higher Ed*, July 29, 2013

[xxix] *Ferment in the Field*, Journal of communication, 3:1983

[xxx] http://www.ideo.com/images/uploads/thoughts/IDEO_HBR_Design_Thinking.pdf

xxxi *Job Skills Expectations Unmet*, Ry Rivard, *Inside Higher Ed*, August 28, 2014

xxxii http://sites.nationalacademies.org/pga/guirr/index.htm

xxxiii Data on File, USC Annenberg

xxxiv Hewlett et al., 'How Diversity Can Drive Innovation," http://hbr.org/2013/12/how-diversity-can-drive-innovation/ar/1