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How NASA Leaders Enhanced the Meaningfulness of Work by Changing the Meaning of Work

A Winter Maneuver of Squirrels

An Interview with Liaoyuan Zhang the Founder CEO of Three Squirrels Vísion Without Boundaries

New Ideas for Business Practices

MANAGEMENT INSIGHTS

Co-published by School of Management, Fudan University and International Association for Chinese Management Research (IACMR)



Guiding business to succeed in the new economy

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Vision 2020

It is with great excitement that I present to you the 2019 annual English issue of Management Insights. While Management Insights is a quarterly magazine in Chinese, the English version is published once a year. In this issue, twelve research highlights and three CEO interviews are included.

The twelve research highlights are rewritten from articles published in top management and psychology journals¹. Together they represent the most significant research findings in people and organization management. As you can see, several papers demonstrate and explain China specific phenomena. For example, in "The Hidden Side of Collectivism", the authors show that people in China are quite vigilant toward ingroup members, because as collectivists they tend to perceive withingroup competition and interpret seemingly friendly behaviors as hypocritical action with competition intentions. In "What is Parochialism?" the authors define it as a product of the cultural and economic history in China, and is characterized by closed-mindedness, self-protection, and ingroup focused social relationship. The authors find that parochialism leads to low trust, low employee empowerment and low employee engagement; and it impedes intra- and inter-organizational knowledge sharing and learning. In "Temple Guardians", the authors investigate the forces behind the curtailing marketization of Buddhist temples in China, and discover that it is the rise in the strength of public resistance in the form of the free entrance movement that eventually enabled central governments to tap into public opinion and reduce admission fees.

The other few research highlights report findings that have more general implications in organization management. For example, in "I'm Not Mopping the Floors, I'm Putting a Man on the Moon", the author identifies the pathway leaders use to transform NASA's ultimate aspirations into employees' concrete day-to-day responsibilities. The principals involved in designing the pathway provide guidelines for other organizations to emulate. In "Agony and Ecstasy in the Gig Economy", the authors describe the characteristics of those who work independently and investigate how they keep their work identities alive. It is revealed that actively cultivating a personal holding environment is crucial for an independent worker. This holding environment should have connections to personal routines, to physical places, to significant people, and to a broader purpose. Such holding environment helps the independent workers manage emotional tensions, remain productive, and develop viable work identity.

While the findings reported in the research highlights are insightful, the wisdom and foresight the three CEOs -- Dr. Yin, Mr. Yu, and Mr. Zhang -- shared with us are truly inspirational. For instance, Dr. Yin is the CEO of Beijing Genomics Institution (BGI), a company that integrates genetic research, technology, application, and testing and treatment into one enterprise. BGI's vision is Omics for all. It is in the forefront of genetic research, publishing papers in Nature and Science; and on the application side, it has completed more than 4 million non-invasive prenatal testing and more than 2 million genetic testing for deafness. Dr. Yin explains that although each person's DNA is unique, all human beings have the same genome, regardless of race or ethnicity. Genes are the community of human destiny. Today the only thing that has not been digitized is the genes of a whole person, and BGI is working toward that goal.

Mr. Yu is the co-founder and co-CEO of Ximalaya FM—a mobile podcast App that was established in 2012 and has since attracted more than 470 million users in China, Japan, and the U.S. Mr. Yu believes in the "listening economy" and strives to make Ximalaya multidimensional: from online to offline; exploring the application of AI voice interaction, and reforming how people get information. Currently, Ximalaya uses many algorithms to determine the popularity of the content based on user experience, which enables the high-quality content and talented hosts to get more exposure. It then develops the AI speaker to let users get access to content more conveniently. Mr. Yu believes that the future scenario is that everything is connected to the internet and everything has its own voice and could speak to you.

I hope that my brief description gives you a glimpse of how exciting this issue is. I also hope that it could provide you a 20/20 vision into the future.

Happy New Year!

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MANAGEMENT INSIGHTS

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Management Scholars' Bookshelf

Book recommendations from top management scholars

David De Cremer

Professor

National University of Singapore



Business Exposed: The Naked Truth About What Really Goes On In the World Of Business

Auther: Freek Vermeulen Publisher: Financial Times Prentice Hall

I recommend the book because I believe that many of our business models need to be adjusted for the unpredictable and irrational nature of human reality if we want to succeed in the future. This book does exactly that! It brings the best insights of human behaviour into the realm of business strategy and illustrates in a convincing way how our business world works with business myths in mind rather than the reality it is confronted with.



Abhinav Gupta Assistant Professor University of Washington

Saving Capitalism: For the Many, Not the Few

Auther: Robert B. Reich Publisher: Vintage

This book examines ethical issues related to "free-market" capitalism and how propaganda by elite actors with vested interests can create misconceptions about how companies create value for shareholders and the society at large.





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Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism

Auther: Ha-Joon Chang Publisher: Bloomsbury Press

This book scrutinizes prevailing beliefs surrounding international trade and separates facts from fiction about how countries make economic progress.



Elizabeth Campbell Assistant Professor University of Minnesota



The Person You Mean to Be: How Good People Fight Bias

Auther: Dolly Chugh Publisher: Harper Business

I was thrilled to have an evidence-based view of how we can bring awareness to our own biases (and those of others) and also combat them in daily ways. In *The Person You Mean to Be*, Chugh brilliantly combines her deep expertise on the topic with her endearing personality to help readers forge ahead into the tough work of examining our own bias and bounded ethicality. The book does a wonderful job not only brings evidence-based biases into the spotlight but also offers practical ways to counteract these biases.

Deep Work: Rules for Focused Success in a Distracted World

Auther: Cal Newport Publisher: Grand Central Publishing

In Deep Work, Newport shares how he has thought deeply about how to use time efficiently and valuably. This book offers some thought-provoking tactics for how we should and shouldn't spend our time. While I doubt most people would choose to put all tactics into practice (as he is jaw-droppingly protective of his time), his approach sparks introspection about how we are and can be deploying our most valuable resource.





Junchao Li Assistant Professor Tulane University

Hit Refresh The Quest to Reductory Microsoft's Soil and Stagine a limiter Future for Everyone Satya Nadella Insure to the West of the West

Hit Refresh: The Quest to Rediscover Microsoft's Soul and Imagine a Better Future for Everyone

Auther: Satya Nadella Publisher: Harper Business

Under the leadership of Satya Nadella, Microsoft has tripled its market value and regained the major-player role in the technology industry. In this book, Satya Nadella, who remains publicly low-key, shares his life stories, his leadership lessons, and how he has transformed a technology Titanic that was sinking.

Research Highlights



"I'm Not Mopping the Floors, I'm Putting a Man on the Moon": **How NASA Leaders Enhanced** the Meaningfulness of Work by Changing the Meaning of Work

Leaders need to help employees identify the pathway between their day-to-day responsibilities and the organization's ultimate aspirations.

Legend goes... While touring NASA headquarters, Kennedy encountered a custodian mopping the floors. Kennedy asked the employee, "Why are you working so late?" The custodian responded, "Because I'm not mopping the floors, and I'm putting a man on the moon."

ork meaningfulness, or the perception that daily **V** responsibilities have a greater significance, has gained importance for employees and organizations. Employees often value work meaningfulness over income, job security, and career advancement opportunities due to its potential to enhance well-being. To enhance work meaningfulness, leaders often convey the organizations' ultimate aspirations with the intention of infusing work with a greater sense of significance. Communicating the most far-reaching goals that the organization seeks to attain can make work more meaningful, but this approach may pose the risk of making employees feel dispirited and disconnected from their day to day work because these ultimate aspirations are so far removed from employees' everyday reality. Given the unparalleled importance of meaningfulness in organizational life, this contradiction poses a significant challenge for theorists and practitioners. By undertaking a systematic inductive investigation, Andrew Carton, a professor at Wharton School of Business, uncovers the mechanisms through which the undesirable outcomes of conveying these grand conquests can be negated. The crux of the findings lies in reprising the role of leaders as architects who conjure the pathway connecting lofty organizational goals to concrete individual actions. The process through which leaders help employees overcome the paradoxical effects of ultimate aspirations involves several steps.

The Vision Trap

The first step in solving this paradox is to recognize the distinction between the organization's ultimate aspirations and employees' daily work. While the ultimate aspirations are timeless, far-reaching, and grand in scale, day-to-day responsibilities tend to be the opposite - time-constrained, narrowly defined, and small in scale. These fundamental differences between the two hinder employees' ability to establish any connection between them. One can surely empathize with an employee struggling to find a link between his deadlinedriven project work and his company's abstractly defined mission of "turning knowledge into value". While the aspirations can have motivating effects, they are a potential source of disillusionment because they are so far removed from a schedulable act. The onus of making these aspirations more concrete and proximate for the employees falls on the organizational leaders.

Leaders as Architects of Cognitive Roadmaps

Leaders need to take explicit steps to help employees identify the pathway between their work and the organization's ultimate aspirations. They need to be architects who optimally motivate employees by creating a cognitive blueprint composed of a small and streamlined constellation of connections that link everyday work to the organization's grandest aspirations. Given the complex and paradoxical nature of the issue, only a systematic investigation can illuminate the steps that leaders take to help employees forge this connection and reveal how these steps impact employees.

Methodology

Understanding how daily work connects to the

organization's ultimate aspirations could be facilitated by a systematic deconstruction of a case in which employees are able to perceive this connection. The pursuit by the U.S. National Aeronautics and Space Administration (NASA) in the 1960s to land on the moon exemplifies such an occasion. The robust amount of archival data available from this historical period prompted the author to study NASA to understand its leaders' strategies. Extensive data were collected from numerous sources such as documents released by NASA's public information office, 100 online sources, 20 webpages from the U.S. public broadcasting system consisting of employees' commentary, five audio recordings featuring John F. Kennedy and lower-level NASA employees, 4.5 hours of documentary footage, and 95 published interviews, etc. Using an inductive approach, the author coded archival data until the analysis of additional data led to no new insights.

Findings

The analysis culminated in a comprehensive model with four leader sensegiving actions and five stages of connection-building by the employees.

Four Leader Sense-giving Actions

Leaders engage in four actions that built on each other to reveal a coherent "structural blueprint" through sensegiving - a discursive tactic in which leaders outline the relationships between daily work, intermediate goals, and ultimate aspirations.

1. Reducing the number of organization's ultimate aspirations to a single overriding aspiration that governs all other organizational efforts. Kennedy did so by reducing NASA's ultimate aspirations from three to one – 'to advance science by exploring the solar system'.

2. Shift focus from an abstract ultimate aspiration to a highly concrete and time delimited organizational objective. For Kennedy, this objective was landing a man on the moon and returning him safely to the earth. This shift helped to focus of attention and provided concrete snapshots of a foreseeable, real event while being clearly aligned with NASA's ultimate aspiration of advancing science by exploring the solar system.

3. Leaders communicate milestones by communicating a limited set of sub-goals that comprise a "passageway" that illuminates how employees' day-to-day work will allow them to achieve the concrete objective. At NASA, these milestones were brought to life by three different programs - Mercury, Gemini and Apollo.

4. Leaders use "embodied concepts" to affix ultimate aspiration to a concrete objective. Kennedy used rhetorical language to affix NASA's ultimate aspiration of advancing science to the concrete objective of landing on the moon. Using the embodied concept, he employed a figure of speech in which abstract ideals were located in a real-life location ("new hopes for knowledge and peace are" on the moon).

Five Stages of Connection-building

As leaders proceed through the four sense-giving actions, employees progress through five distinct perceptual stages through which they connect their dayto-day work to the organization's ultimate aspiration.

Stage 1 - Proximity: By shifting attention from an ultimate aspiration to a concrete and time-constrained objective, leaders make employees feel that the organization's ultimate goal is proximate. At NASA, Kennedy created a perception of proximity in both space and time by painting a verbal picture of an event that could happen one day. Unfortunately, boosting proximity can impair the plausibility of achievement as concrete objectives create a clear distinction between success and failure. Moreover, shifting attention to a concrete objective can impair meaningfulness as a concrete objective lacks value-laden connotations inherent in the ultimate aspiration. To address these negative effects while preserving the perception of proximity, employees engage in four more stages of connection building.

Stage 2 - Stepping stones: To establish a credible pathway to an objective that seems impossible, employees use a small number of stepping stones outlined by the leader to connect the dots between their present reality and the ultimate aspiration. At NASA, employees threaded together three stepping stones outlined by Kennedy in order to see a path to the moon. This approach also boosted meaningfulness as employees could perceive how their ongoing work contributed to the objective's realization through a small string of connections.

Stage 3 - Clarity of individual contribution: It is also critical to ensure that each employee engages in individual connection-building by sensing how his or her own individual work contributes to the objective's realization. Employees should recognize that they and their colleagues are all oriented toward a common goal. At NASA, employees used Kennedy's streamlined blueprint to cognitively flesh out a complex network of connections that represented the contributions of all employees across NASA. Recognizing how their own work was one critical piece of many boosted employee meaningfulness.

Stage 4 - Reconstruing day-to-day work as the organization's objective: When employees sense how their individual work is closely tied to the objective, they reconstrue their work in broader and more distal terms (an event that is years away), rather than construe their tasks as low-level actions. At NASA, Kennedy's sense-giving steps gave employees a personal connection to a proximal objective, which helped them

reconstrue everyday work as an ongoing pursuit of the objective. Instead of focusing on specifics of day-today responsibilities, such as building electrical circuits or developing rockets, NASA employees described their tasks as an enduring effort to send a man to the moon. This construal process captures employee imagination and emotion, resulting in enhanced meaningfulness.

Stage 5 - Reconstruing day-to-day work as a symbol of the organization's ultimate aspiration: Construing the objective as the higher purpose that it symbolizes gives employees the strongest possible connection between their daily work and their organization's ultimate aspiration. At NASA, employees transformed the objective of landing on the moon as a symbol of 'advancing science' or the 'advancement of human achievement'. Such symbols combine the prospect of real-world achievement necessary for employees to feel connected to the organization's real-life pursuits and the enduring, timeless ideals that are designed to outlast any single organizational objective. This allows ultimate aspirations to make every day work meaningful.

Through these stages, employees reconstrue their everyday work at a broader level, culminating in the perception that an ultimate aspiration is not merely a downstream consequence of their work but is their work.

Managerial Implications

Conveying grand organizational aspirations to employees can be a great tool for enhancing work meaningfulness, but it comes with the risk of alienating them from their regular work. Leaders should perform the extraordinary feat of transforming a seemingly abstract aspiration into a concrete manifestation in reality by conveying it as a tangible goal rather than simply showcase the organization's ultimate aspirations. Leaders need to function as architects and craft a simplified blueprint with a concrete overarching objective at the forefront, portraying it as a symbol of organizational aspirations. Bolstering connection-building using this blueprint can help employees reconstrue what their routine work represents at a broader level without dispiriting them. In short, the key to enhancing the meaningfulness of work lies in changing the meaning of work.

This summary is based on the full article, "I'm not mopping the floors, I'm putting a man on the moon": How NASA leaders enhanced the meaningfulness of work by changing the meaning of work. *Administrative Science Quarterly*, 63(2): 323-369, 2018. DOI:10.1177/00018392 17713748journals.sagepub.com/home/asq. Andrew M. Carton (carton@wharton.upenn.edu) is an Assistant Professor of Management at The Wharton School, University of Pennsylvania. Misha Mariam is a Ph.D. candidate at University of Washington, and she is also associate editor of Research Highlights of Management Insights.

The rise of the Naysayers: How Naysaying Promotes Initial Power Establishment and Leadership Endorsement



Don't let the wrong people naysay their way to the top.

he past decade has witnessed an increase in the ascent of power by people who are not known for their political prowess or competence, but for their blunt and cynical remarks, or vitriolic style of discourse. This phenomenon stands in stark contrast to conventional wisdom which suggests that people prefer supportive and agreeable leaders. The author provides clarity to this intriguing trend by proposing naysaying as an unanticipated, yet formidable determinant of power. In turn, this increases the assessment of naysayers' leadership efficacy. Why would anyone choose to be led by those who use incendiary and obscene language or blatantly violate social norms? The answer involves the interplay of numerous evolutionary and psychological mechanisms, which the author explicates through the conceptual model of the naysayer effect.

Naysaying as a Power-Signaling Cue

Social hierarchies are crucial psychological structures created by human beings to preserve order and to help us navigate the world. Power is a primary force of social hierarchy, which manifests as the asymmetrical capacity to influence others through control over resources, rewards and punishment. Therefore, being able to discern a person's power is evolutionarily desirable. We have evolved to be attuned to cues that signal power and developed expectations of how the powerful will behave. People attribute power to those who display the right cues and behaviors regardless of whether the person actually has power. Therefore, these expectations create a cyclical reinforcement - the more power-holders exhibit a certain behavior, the more likely observers are to perceive that behavior as a power-signaling cue.

Historically, these cues have been physical prowess, height, action-orientation, and so on. This paper focuses on naysaying as a less examined behavioral cue to assess a person's power. In other words, powerful people behave as naysayers to some extent, and naysaying can function as a power-signaling cue.

Indeed, numerous findings have indicated that people with power are more likely to naysay across several contexts. Power inhibits perspective taking and impedes empathy, making the powerful people more likely to voice their criticisms and less affected by how their behavior may demoralize subordinates. People with power are also more likely to get away with violation conventional norms and be less sensitive to the social implications of their negativity. These findings illuminate how naysaying becomes a powersignaling cue. When people observe this powerassociated behavior, they may attribute power to the naysayer. Thus, negative and critical expressions can be construed as a sign of power. For example, it has been shown that people perceived President Clinton as being more influential when they witnessed him expressing anger about the Monica Lewinsky scandal than when they saw him expressing remorse about it. Findings of the negotiations and social aggression literature further support the assertion that people perceive their naysaying counterparts as more powerful.

The author makes the theoretical prediction that agency, or the ability to act independently, is the underlying psychological mechanism that determines why others perceive naysaying behaviors as power-signaling cues. Naysayers who display counternormative behaviors are perceived to be free of constraints and have the capacity to behave in

accordance with their own agency. When naysayers display agency, it not only fuels their sense of power, but also their observers attribute more power to them. In short, people endow naysayers with more power than their cheerleading counterparts because naysayers are perceived to be displaying more agency.

From Naysaying to Perceived Leadership Efficacy

Perceptions of power driven by agentic behavior can manifest in important ways for the naysayer, such as higher-paying and higher-status positions, more favorable performance evaluations, and so on. The author highlights that the link between naysaying and power may also have direct implications when people assess naysayers' leadership efficacy.

People perceive naysayers to have the agency to be independent and resist others' influence. This leads naysayers to be perceived as more powerful and to possess greater leadership efficacy than cheerleaders across contexts - from presidential candidates to small group leaders. Consequently, people choose naysayers as leaders, even when they would be subjected to the naysayer's leadership.

Research Overview

To ground the theoretical arguments regarding the naysayer effect in empirical evidence, the author conducted a rigorous investigation across eight different contexts, ranging from presidential debates and art reviews to opinions on social issues. Results from 11 studies evidenced the prediction that naysaying and power are causally linked through the perception of agency and they have direct implications for leadership efficacy.

The first two studies investigated whether people perceive naysayers to be more powerful than cheerleaders and provided converging evidence for this causal effect. In the first experimental study, 158 participants were randomly assigned to read one of three versions of a review of an abstract painting and then asked to indicate how powerful the reviewer appeared to be. Results show that people perceived naysayers to be more powerful than cheerleaders or neutral reviewers, but not more competent. One hundred and nine participants were asked to read either the naysaying or cheerleading depiction of a fictional person and then rate this person in the second experiment. It is also found that people perceived naysayers to be more powerful, but also less likable. The third and fourth studies were used to establish agency as the underlying psychological mechanism between naysaying and power. In the third study, 90 participants were randomly assigned to read either supportive or naysaying statements about an issue, and then assessed which statements were written by people with agency. Results show that naysaying statements were perceived to be more indicative of an individual's agency whereas supporting statements were not. The fourth study requested 128 participants to read two versions of a review and then indicate how powerful and agentic they perceived the reviewer to be. These studies indicate that people perceive naysayers as more powerful than cheerleaders because they feel that naysayers act on their agency.

The fifth study used an innovative approach to test these predictions in a naturalistic context by demonstrating that U.S. voters perceive naysaying presidential candidates as more powerful and effective. Five hundred and eighteen participants read four pairs of statements by U.S. presidential candidates and then rated each candidate on power, agency, relative effectiveness as president and for whom they would vote. Results suggest that voters deem naysaying presidential candidates to be more powerful based on higher agency and, are more willing to vote for them. The sixth study was conducted in a rich and dynamic context with real-time virtual interactions. A total of 167 participants interacted with two confederates respectively. In each triad, one confederate expressed neutral views, while the other expressed either critical or favorable views, based on which they were rated on power, agency and leadership effectiveness. Results have provided empirical support for the

entire predicted-behavior model, from naysaying to agency to power and, finally, to leadership efficacy.

It is also important to know if people would like to endorse a naysayer as their own leader. One hundred and six participants interacted with one naysayer and one cheerleader. Participants rated their perceptions of each counterpart's agency and power and then selected one counterpart as their representative for a negotiation. Findings demonstrate the causal link between naysaying, agency, and power, and confirm peoples' willingness to be led by a naysayer.

Studies 8-10 tested the naysayer effect from a self-perception angle to study if the act of naysaying could induce actors to feel more powerful. Participants were asked to provide naysaying or cheerleading reviews for an artwork, after which they rated how powerful the act of reviewing made them feel. Results revealed that naysaying itself can induce a sense of being powerful, which could, in turn, consolidate the social perception that naysayers are powerful. Finally, in Study 11, 147 participants were asked to write naysaying or cheerleading reviews of fast-food chains, and then indicate the extent to which they were acting on their own agency and how powerful they felt. Results showed that the same psychological mechanism— agency explained why naysayers feel more powerful.

Discussion

Detecting cues that enable us to understand power dynamics can help to structure our social lives. This research contributes to our understanding of this complex phenomenon by introducing naysaying as a power-signaling cue that is firmly embedded in our psyches. Driven by the psychological mechanism of agency, both observers and actors feel empowered by the act of naysaying, which can lead naysayers to exhibit behaviors indicative of power. In turn, observers endow naysayers with greater power. This paper provides a strong case for a generally unappealing behavior—naysaying—by demonstrating its powersignaling function across a range of contexts.

Managerial Implications

These findings have important practical implications, especially given the current state of growing global unrest, economic turmoil, and ideological clashes that can fuel people's desire for a different type of personage in power. Power dynamics affect all organizational process, making it critical for us to understand who attains power and why. On the one hand, expressing criticism and engaging in normviolating behaviors can have a positive consequence for naysayers in the form of leadership positions, especially in competitive contexts, or when organizational members are discontented with the status quo. On the other hand, organizations can suffer adverse outcomes if people initially reward naysayers' agency instead of critically assessing their long-term effectiveness as leaders. Therefore, individuals should tread carefully when using naysaying as a cue for attributing power or leadership selection. This research is the first step toward elucidating the relationship between naysaying and power, thereby ensuring that we do not advertently let the wrong people naysay their way to the top.

This summary is based on the full article, "Naysaying and negativity promote initial power establishment and leadership endorsement." *Journal of personality and social psychology*, 115(4): 638-656, 2018. Eileen Y. Chou (eileen.chou@virginia.edu) is an Associate Professor of Public Policy at Batten School of Leadership and Public Policy, University of Virginia, Charlottesville, VA 22904. Misha Mariam is associate editor for Research Highlights of *Management Insights*, and a Ph.D. student at University of Washington.

The Hidden Side of Collectivism: Greater Vigilance towards Ingroup Members?



Collectivistic cultures are actually not as harmonious as we assumed.

Harmony" has been one of the key words mostly often used in describing East Asian culture.
Harmony is a virtue highly espoused in the classics of Confucianism and Daoism. Harmony is the label travel guides use to set visitors' expectation of the targets.
Harmony is the feature used in the last century to signify the ethnography of China and Japan. Harmony is the building block of definitions, such as collectivism and interdependent self in cultural psychology.

Harmony is without doubt a crucial component in East Asian cultures. However, some researchers pointed out that we only have a superficial understanding of harmony and its diverse manifestations and complex implications in East Asian culture. For instance, anthropologists have observed that under the harmonious surface of East Asian culture, there exists strained inter-personal relations in the deep level. Due to cultural differences in the emotional, verbal, and behavioral signals of conflict, outside observers may not be able to notice the conflict behind harmony and even misjudge or misinterpret the nature of conflict and its relation with harmony.

Collectivism: Vigilance behind Harmony

Social psychologists proposed that collectivism does not simply mean Utopian social relations. Triandis, the author of the worldwide-renowned book Individualism and Collectivism, suggests that people in collectivistic cultures do not treat everyone nicely but they are highly conditioned by whether the target is from the ingroup or one's small circle. Markus and Kitayama, known for their theory of independent-versus-interdependent self, also emphasize that interdependence does not necessarily go with "harmony or affection." Psychologists Adam also found that people in Ghana, a collectivistic society, are more likely to see their friends as potential enemies, compared with Americans.

To deepen the understanding of collectivism and the implication of harmony for it, Shi Liu, Michael Morris, Thomas Talhelm and Qian Yang published at Science their latest research findings. They found that collectivistic cultures, for example, China, are actually not as harmonious as what we have assumed. Instead, people in collectivistic cultures are more likely to perceive within-group competition and thus more vigilant against ingroup members than people in individualist cultures, such as the United States.

From a socioecological perspective, the research proposes that the collectivism originally formed in ecologies with quite tight social relationships. Tight or close social relationships are not necessarily positive. People in collectivist ecologies know thoroughly their downside, such as other ingroup members' constraints of them and infringing on their interests.

The tension embedded in the tight social relationships usually occurs in descriptions of traditional villages. For instance, anthropologists found in their observation of rice-farming villages in Japan that villagers competed fiercely against their neighbors for water. This highlights the seemingly paradoxical social relationships in collectivistic environments where



lots of competitions and cooperation, for instance, sharing labors and constructing the irrigation system together. Recent cross-cultural research also found this paradox in the workplace: compared with Americans, Chinese are more likely to regard their relationship with coworkers to be collaborative as well as competitive.

To understand to what extend people tend to perceive social situations as competitive, researchers investigated the "zero-sum belief", the belief that "one person's gain is possible only at the expense of other persons". Data from 37 countries show that the more collectivistic countries have stronger zero-sum beliefs, suggesting that insiders of the collectivist culture has a more comprehensive understanding of the two sides of social relationships. Given that competition and conflict are the natural results of the zero-sum belief while cooperation and harmony are emphasized in collectivistic cultures, people have to avoid direct confrontation and shift to more implicit and subtle ways to compete and express conflict. This is social vigilance.

Vigilance is a core concept in ethology - the study of animal behavior in their natural habitat, referring to animals' tendency to perceive threats. Different animals are sensitive to different types of threats. Birds and herd animals are more vigilant to predators, whereas primates are more vigilant to ingroup members as they are the primary source of competition and attack. Primatologists define the vigilance towards the same species as "social vigilance."

Ingroup Vigilance and the Underlying Mechanism

Shi Liu and her coauthors (2019) define the vigilance towards ingroup members, such as coworkers and classmates, in the human society as "ingroup vigilance," referring to the tendency to perceive threats from ingroup members. They propose that collectivist people are more likely to perceive ingroup competition and anticipate negative intentions from ingroup members. It is critical to recognize that "vigilance" is by nature different from "distrust", "suspicion", "hostile attribution bias", or "paranoid social cognition," which have ostensibly negative tones. Vigilance is neutral, objectively describing the cognitive tendency rather than prejudicing it. Actually, vigilance is vital for human being's survival and adaptation to the environment. For example, Yamagishi et al. (2019) proposed that



collectivist cultures use sanctions more frequently to constrain selfish behaviors and promote pro-social choices. Similar to sanctions, vigilance is also to protect people from ingroup members' threats. Different from sanctions that are reactive after threat detections, vigilance is proactive to prevent threats from happening.

Shi Liu and her coauthors (2019) proposed two hypotheses: (1) people in collectivistic cultures are more vigilant towards ingrouop members than people in individualistic cultures, and (2) this cross-cultural difference is rooted in their difference in perception of within-group competition (the zero-sum belief). They conducted three studies to test the hypotheses.

Study 1: Comparing Chinese and American Working Adults

Sixty-six Chinese and 52 Americans working adults participated in the study. They each read four artificial scenarios of within-group competition (a. actors competing for a leading role; b. coworkers competing for bonus; c. schoolmates competing for scholarship; d. government officials competing for promotion). For each scenario, they indicated their expectation of choices possibly made by other people around them and came up with two or three concrete behaviors.

Results showed that, compared with Americans, Chinese participants anticipated more unethical competitive behaviors (e.g., "poison other actresses' food," "have sex with the producer"; China 20% versus US 11%) and more behaviors in the grey area (e.g., "become buddy-buddy with the director"; China 18% versus US 5%) but fewer ethical behaviors (e.g., "do research on the role"; China 62% versus US 84%).

Study 2: Comparing China's Rice and Wheat Farming Regions

China is not a culturally homogeneous society. For instance, the northern and southern regions in China have different ecological and geographical environments and relatedly different social lives. In his article published at Science in 2014, Thomas Talhelm, a professor from Chicago University, proposed a "rice theory" based on his finding that people in the traditionally rice-farming regions of southern China, for instance, Guangzhou, Shanghai, are more collectivistic than those in the wheat-farming regions of northern China, such as Beijing. Accordingly, Shi Liu's team tested the relationship between collectivism and ingroup vigilance



by comparing the northern and southern regions in China which are in the same economic, political, and institutional system but different in collectivism.

Three hundred and ninety-eight college students in China participated in the study. They read the same four scenarios and answered the same questions as the participants did in Study 1. They also reported the provinces they came from. In addition, they answered questions about the extent to which they saw their classmates as competitors (e.g., "A classmate may take away things that my school is giving me right now"). To control for other factors related to collectivism or individualism, ingroup vigilance and withingroup competition, they measured social economic status (which is found to be negatively related to competition perception), GDP per capita (as a measure of modernization which is negatively related to collectivism), pathogen prevalence (as communicable disease gives rise to avoidance of strangers and increases collectivism), population density (which is positively related to competition for resources), and government efficiency and anti-corruption.

Results showed that participants from China's rice regions (high on collectivism) perceived more

competitions within groups and thus were more vigilant towards ingroup members than participants from China's wheat regions (high on individualism).

Study 3: The Causal Relationship between Competition Perception and Ingroup Vigilance and Its Boundaries

This study manipulated competition perception in an experiment, which provides methodological rigor for establishing causality. Two hundred and nineteen Chinese and 239 American working adults participated in the study. They were randomly assigned to three conditions. Participants in all three conditions read the same beginnings of three stories, which described friendly behaviors between colleagues or classmates in their daily interactions, such as inviting a colleague for dinner, helping a colleague check technical details of a project, and lending class notes to a classmate. Then participants imagined what would happen next. However, the competition relationship between the ingroup members varied across the three conditions. The relationship was described as win-win in the first condition, win-lose in the second condition, and being ambiguous in the third condition.

Results showed that when the competition relationship was ambiguous, Chinese participants were more than five times (21%) as likely to perceive the friendly gesture as sabotage in disguise than Americans (4%), such as intentionally making the colleague drunk to influence the client meeting in the next day, erasing some parts of the project documents, or "accidentally" throwing a few pages into the trash. However, when the competition relationship was clearly win-lose, the difference between Chinese (35%) and the Americans (25%) in ingroup vigilance became much smaller, primarily due to the Americans' increase in vigilance. When the competition relationship was clearly win-win, Chinese (8%) and the Americans (5%) also became quite similar to each other, primarily due to the Chinese' decrease in vigilance. ⊠

Managerial Implications

Previous research on collectivism has been focusing on its harmonious and cooperative side. This research highlights the not so harmonious side of collectivism: people in collectivistic cultures tend to perceive withingroup competition and be vigilant towards ingroup members; even seemingly friendly behaviors tend to be interpreted as hypocritical acts with competition intentions. This is consistent with the view held by Yamagish, a cultural psychologist famous for his research on collectivism. He argued that the greater conformity shown by East Asians than Americans was not due to their stronger preference for conformity or intrinsic endorsement for conformity, but just a strategy to avoid external sanctions and negative evaluations. Similarly, the harmony in collectivist cultures may not be due to East Asians' heartedly harboring of cooperative and friendly relationships but possibly a strategy to prevent conflict explosion and maintain coordination.

Therefore, collectivistic culture is multi-faceted. Conflict and competition are inevitable in almost any cultural groups. It is just that they are manifested in different forms, which are rooted in their respective social, historical, and even ecological and geographical environments. Pursuing more objective and profound understanding of collectivism and its difference from other cultures will help us to interpret our observations of group and individual behaviors so that we can more effectively manage group and inter-personal relationships, and more objectively treat and deal with cultural differences as well.

The research also suggests potential avenues to reduce ingroup vigilance and competitive behaviors in collectivistic cultures. The finding in Study 3 that Chinese participants were not vigilant against their coworkers in the win-win situation suggests that organizations in China can foster cooperation by setting incentives in a win-win payoff among coworkers. For instance, the bonus and promotion incentives can be set based on the group performance rather than the individual performance. In this sense, a collectivistic incentive system will ease ingroup tension and vigilance against ingroup members in collectivistic cultures.

This summary is based on the full article: "Ingroup vigilance in collectivistic cultures", *Proceedings of the National Academy of Sciences*, 116(29):14538-14546. S. Liu is a doctoral student at Columbia University, M. Morris is a Professor at Columbia University, T. Talhelm is a Professor at University of Chicago, and Q. Yang is a Professor at Zhejiang University. The rewriter Zhi Liu is an assistant professor at Guanghua School of Management, Peking University.



W hether or not certain goods with intrinsic value should be traded has been a topic of heated debates. While economists argue for the many virtues of the market, scholars from other disciplines have argued that commodification of certain things should be prohibited as it violates principles of social justice or undermines their actual value. Connections with the divine or spiritual gifts perfectly exemplify goods that are argued to be valuable in dimensions that prices cannot capture. The existence of starkly contrasting views regarding the commercialization of such goods poses an interesting question - How do some moral domains become and stay marketized?

The authors of this paper theorize a contentious perspective on how moral markets develop. By studying the practice of charging admission fees across 141 Buddhist temples in China, the authors identify factors driving the full circle from legitimization and initiation of moral domain marketization to resistance and even reversal of such commercialization. It is apparent that there are several interrelated political, social and economic elements which need careful deliberation to understand how this complex process plays out. However, the authors lay out a comprehensive and insightful map of the elements involved. First, they shed light on the factors that motivate and allow the local government to commercialize temples. Then, they highlighted the variation in the degree of temple commercialization and discussed the critical political mechanisms and cultural forces that drove this heterogeneity.

The economic rationale for Moral Marketization: The avenues through which markets encroach on religion in modern China is deeply embedded in the country's economic and political systems. Buddhist temples represent an important aspect of China's unique culture and heritage as they hold artifacts such as paintings, sculptures and architecture. The explosive growth of tourism in China has resulted in the limited number of nationally prominent temples being regarded as highly precious "assets" by the local area. Under the pressures of economic development, these Buddhist temples become "cash cows" for local governments relying on admission fees as a principal pillar of the local economy. The local officials ignore citizens' grievance as long as they do not lead to mass incidents that disrupt social stability or attract the attention of their supervisors. Thus, they allow marketization of temples and keep charging high admission to boost the local GDP in the short term.

Cultural Resistance: The "ticket economy" approach to boost the local economy through admission fees is not immune to public resistance. While high admission fees generate short term wealth, they also make people wonder whether Buddha, in fact, loves money or favors the rich over the poor. The notion that spiritual gifts can be purchased with money and that a connection to the sacred is available only to those with means propels cultural preservationists to assert that monetization of these goods is unjust, self-destructive or both. This view has culminated in collective resistance to the practice of charging high admission fees in the form of the Free Entrance Movement. It is hard to imagine how the grass-roots level, 'Free Entrance Movement' by the cultural preservationists can curtail market advancements backed by political power. To explain how this is made possible, the authors first shed light on the fractured structure and distinct motives of the government. Although they often viewed as a monolithic entity, governments are actually layered and constitute of several cliques with different strategic goals. While local officials are driven by short-term economic growth, the central government strives to maintain a fine balance between economic development and social peace. To maintain its image as a champion of social morality and justice, the central government reacts by curbing local governments' attempts at commercialization as cultural resistance gains critical mass. Accordingly, the authors suggest that a rise in the strength of public resistance in

the form of the Free Entrance Movement in a region would be related to a subsequent decrease in admission fee.

Feedback channels: Top-down and bottom-up processes are both likely to enable central governments to tap into public opinion. First, participation by public representatives from various social groups in parliamentary institutions provides information on citizens' grievances, which helps the central government avoid policies that might threaten its survival. Accordingly, the authors suggest that the appointment of a monk or temple abbot as a representative of the Buddhist community at the central level would be related to a subsequent decrease in temple admission fee. Second, the Internet provides a channel for the central government to gather social feedback. China's censorship apparatus refrains from suppressing bottom-up criticism because such information is useful for the central government to gauge public opinion and address social problems before they become threatening. Moreover, the Internet provides a channel for directly coordinating collective action which propels the central government to take action. Therefore, the authors, suggest that high Internet penetration is related to a subsequent decrease in admission fees.

Methodological approach and findings

To ground their ideas in empirical evidence, the authors conducted an extensive study on the commercialization of 141 Buddhist temples in China from 2006 to 2016. To measure the extent of temple commercialization, the authors collected data on admission ticket prices and several non-fee-related indicators (online reviews rating a temple as being commercial, paid entertainment or services, addition of man-made scenic sites and so on) from 80,000 online reviews, approximately 300 news reports, as well as each temple's website. Economic pressure was measured by the ranking of GDP growth rate in the county, while the strength of the Free Entrance Movement was represented by the number of nationally prominent temples that did not charge admission fees in the previous years.

Rigorous statistical analysis revealed support for most arguments framed by the authors. Consistent with their expectation, local governments in areas with more resources rely less on temple admission fees to generate revenue. Thus, an increase in local economic growth is related to a decrease in the level of temple commercialization. Results also confirm that when the Free Entrance Movement is stronger in a region, the

Managerial Implications

The authors of this paper disclose how the same political mechanisms, through which markets encroach on the moral domain, can create opportunities for cultural preservationists to resist advancement of markets effectively. By revealing the dynamic process and underlying mechanisms of moral marketization, they equip cultural preservationists with bottomup strategies for resisting government pressures by leveraging institutional structures to their advantages. It illustrates how people can use the government's social feedback mechanisms to generate collective action and empowers them to counter the hegemony of commercialism.

This summary is based on the full article, "Contesting commercialization: Political influence, responsive authoritarianism, and cultural resistance", *Administrative Science Quarterly*, 64(2):435-465, 2019. DOI:10.1177/0001839218770456journals.sagepub.com/home/asq. Lori Qingyuan Yue (qyue@marshall.usc.edu) is an associate professor of management and organization at the USC Marshall School of Business, University of Southern California, Los Angeles. Jue Wang (wang547@usc.edu) is a Ph.D. candidate of management and organization at the USC Marshall.usc.edu) is an assistant professor of marketing at the USC Marshall School of Business, University of Southern California, Los Angeles. Botao Yang (botao_yan@marshall.usc.edu) is an assistant professor of marketing at the USC Marshall School of Business, University of Southern California, Los Angeles. Rewritten by Misha Mariam, a Ph.D. candidate of management and organization at Foster School of Business, University of Washington, and associate editor of Research Highlight of Management Insights.

Mapping Cultural Tightness and Its Links to Innovation, Urbanization, and Happiness in China







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Unlike in the West, cultural tightness seems to be positively related to a list of benefits in China.

C ultural tightness refers to the strength of the social rules and norms, as well as people's tolerance for punishment or sanctions of deviant behaviour. It is an important dimension to explain cultural differences. The cultural tightness of a society could be influenced by sociopolitical and geopolitical factors, such as demographic profiles, government regulations, religion, education systems and threatening conditions.

Scholars have mapped global cultural tightness and regional cultural tightness within the U.S. The authors of this paper Roy Chua, Kenneth Huang and Mengzi Jin, studied regional cultural tightness in China. China is world's largest emerging economy and home to about one-fifth of the population. Over the past two decades, provinces in China have undergone substantially different developmental stages in terms of economic, social, institutional, and science and technology (S&T) reforms. Social conventions, cultural practices, languages, and labour mobility also vary across provinces due to historical reasons. It is dangerous to perceive China as a homogeneous entity from the lens of cultural tightness.

The authors conducted an online survey, investigating 11,662 people, including students, housewives, corporate executives, and professionals such as scientists, engineers, and teachers, etc., from 31 provinces in mainland China from 2014 to 2017. On average, each province had 376 respondents. Using a six-item survey (Gelfand et al., 2011) (e.g., "There are many social norms that people are supposed to abide by in this province/city", "In this province/ city, if people behave inappropriately, others will strongly disapprove."), the authors were able to map how cultural tightness varies across the 31 provinces of China, providing evidence that advances the theorising of cultural tightness.

Finding 1: Tighter Chinese provinces are associated with higher urbanization and economic growth

In addition to cultural tightness, the authors surveyed some other factors . Data analysis shows that culturally tighter provinces have more governmental control and behavioral constraints in daily life in China. They also have more religious practices and more exposure to threats. These results are consistent with findings in the United States and around the world. However, they also found three major different findings.

It is found that tighter Chinese provinces had higher degree of urbanization. This is opposite to the findings in the United States, where Research Highlights

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Tighter Chinese provinces had higher degree of urbanization. This is opposite to the findings in the United States, where tightness was positively associated with rural population, poverty and poor health.

tightness was positively associated with rural population, poverty and poor health. In China, provinces, such as Guangdong, Shanghai, Beijing, and Zhejiang, are the tightest and have the most developed economy, and therefore, they are subject to stronger regulations. These provinces have high population densities and low production of grains, an indicator of lower agricultural activity, lower poverty rates, higher university education rates, lower fertility rates, higher contraceptive rates and better health, for example, higher life expectancy and lower infant mortality.

The social attitudes related to urbanization are also positively related to cultural tightness. In China, tighter provinces have higher gender equality: female to male ratio in higher education; percentage of people reported having no preference for children's gender. They also have higher tolerance towards LGBT (lesbian, gay, bisexual, and transgender) community due to the increasing exposure to foreign cultures in urban areas. This is opposite to previous research on cultural tightness that tighter areas tend to be more conservative with lower latitude for sexual orientation diversity.

Finding 2: Cultural tightness and innovation at provincial level

It is well established that innovation has two types: radical innovation and incremental innovation. Radical innovations could cause major or more substantive changes, like electricity, telephones and the Internet. Incremental Innovation refers to constantly and gradually advanced, continuous innovation of small and incremental changes, such as making subtle changes to existing products, strengthening and complementing the functionality of existing product designs, and other aspects in small steps.

In studying the relationship between culture tightness and those two types of innovations, the authors analyzed 3.85 million patent data from the National Intellectual Property Administration of People's Republic of China (CNIPA) (1990-2013). It is noted that provinces with tighter culture exhibited lower rates of radical innovation but higher rates of incremental innovation. Provinces with loose culture showed much higher rate of substantive or radical innovation. For example, invention patents per 10,000 scientists and engineers is 70 for Hunan and 96 for Hainan provinces respectively compared with a median

of 30 across all of the provinces. Although these provinces have not been given sufficient attention to, they might be promising regions to generate more substantive and breakthrough innovations.

One explanation for the low radical innovations in provinces with tighter cultures is that cultural tightness socializes people to be cautious and motivated to avoid mistakes, thus decreasing their tendency to experiment with highly novel ideas.

In the past few decades, Chinese government has put strong emphasis on innovation because it believes innovation to be the key to China's next stage of development. Governments at all levels have implemented many initiatives to promote innovation in China. Thus, a strong "innovation norm" has been created. As tight cultures emphasis strictly follows norms, it promotes incremental innovation but hurts radical innovation. A society that emphasizes innovation should not just invest in innovative infrastructure, but more importantly, find ways to shape people's mindset to think out of box.

Finding 3: Tighter Chinese provinces are happier

How is a province's cultural tightness related to the personality and a sense of subjective well-being of its people? The authors measured respondents' Big- Five personality, selfmonitoring tendency and subjective wellbeing, and found that people from tighter Chinese provinces were more aware of how they interacted in social networks.

Moreover, results show that people in tight provinces are not as unhappy as shown in previous research. Specifically, tighter provincial culture is positively related to people's subjective well-being and life satisfaction, probably because of the stability and efficiency offered by these provinces.

Managerial Implications

In summary, these findings suggest that unlike in the West, cultural tightness seems to be positively related to a list of benefits such as stability, efficiency, effectiveness and individual well-being in China. Chinese people are able to find a sense of security and comfort in predictable and regulated social groups. As tightness is positively related to incremental innovation but negatively related to substantive innovation, a big question arises: What should the Chinese government do to promote substantive, breakthrough innovations that could put China ahead of its rivals in the global race to innovate? Are you ready to answer this question?

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What is Parochialism? A Beast that May Block Chinese Firms' Globalization

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Parochialism causes Chinese managers to make poor strategic decisions for short-term gains that damage relationships with global partners.

ross-cultural research often explains Chinese managerial decisions and behaviors according to cultural values, but established cultural dimensions fail to explain many Chinese contradictory managerial phenomena. For example, Chinese culture is often considered to be long-term orientated, while studies reported that some mainland Chinese managers make extremely short-term, opportunity-driven, present-oriented decisions, such as allowing quality to disintegrate and investing without due diligence. Supposedly Chinese society focuses on personal relationships, but some report that Chinese business partners are uncooperative, untrustworthy and uncommitted. Although Chinese culture is supposed to be highly collectivist, Chinese managers might show a very utilitarian attitude toward teamwork and only engage for individually beneficial outcomes.

As Chinese society becomes increasingly modernized, cultural traditions built on the philosophical and cultural heritage continue to influence current management mindset in China. The purpose of this article is to qualitatively explore a conceptual framework of parochialism (xiao nong yi shi) as a cultural mindset and to provide an alternative view that may explain challenges facing globalization of Chinese firms based on China's ecological and sociocultural context. Parochialism is a product of the cultural and economic history in China. The traits of parochialism are engrained deeply in every level of Chinese society. With rapid urbanization in the last four decades, individuals who display certain thinking patterns, behaviors and relationships are commonly criticized as showing parochialism. Such a state of mind is pervasive, beyond income, education or demographic groups. We propose that parochialism is a cognitive hurdle that inhibits successful globalization for Chinese firms. Parochialism is a coping mechanism under uncertainty, but when used for problem-solving it may limit collaboration, trust and long-term vision. Although parochialism is an individuallevel construct, it becomes a group-level concept especially among members of a collectivist society where individuals tend to follow opinion leaders or hierarchical superiors. Parochialism can cause Chinese managers to make poor strategic decisions for short-term gains that damage relationships with global partners.

Sample and Data Collection

Qualitative methods were utilized to examine parochialism. For the exploratory nature of this study, an interpretative approach combining grounded theory and content analysis was adopted. Seventeen face-to-face interviews with managers and executives from both the United States and China were conducted. In the eight US interviews, some interviewees were from organizations that directly worked with Chinese Parochialism is a product of the cultural and economic history in China. The traits of parochialism are engrained deeply in every level of Chinese society.

companies, such as business associations, law firms or news media; others worked in Chinese companies located in the United States. Nine of the interviewees in China were managers or executives from foreign or stateowned companies across several industries.

Data analysis and Findings

The theme of parochialism emerged when the first author was conducting semi-structured face-to-face interviews to study how Chinese firms were adapting cross-culturally in foreign environments. Interviewees raised questions about interactions between Chinese and American business leaders. At that point, the concept of parochialism surfaced to explain the divergent and paradoxical behaviors of Chinese managers, greatly inspired by the sociology literature from China such as From the Soil, the Foundations of Chinese Society by Fei Xiaotong. In this phase of study, the grounded theory approach was employed to allow original and rich findings to emerge and to generate new concepts and theories from qualitative data.

Armed with the initial conceptual ideas that emerged from the early phase of the study, nine structured face-to-face interviews with managers located in China were conducted. The data analysis evolved to content analysis when the coding categories defined in the early phase of data analysis were used through the organizational cultural framework.

CONCEPTUAL FRAMEWORK OF PAROCHIALISM The Cognitive Dimensions of Closed-Mindedness

Several interviewees indicated that parochial managers refuse to consider new ideas. They distrusted outsiders or foreigners and relied instead on their own experience or advice from friends or relatives. Interviewees also reported that parochial managers were often contented with minimal standards and used temporary solutions to problems rather than seek root causes or challenge the status guo for long-term solutions. Those traits were categorized under the cognitive dimension of closed-mindedness, which is consistent with arguments that closedminded people generally avoid exposure to beliefdiscrepant information, seek to reinforce their beliefs, and focus on the short-term interests of in-group circles. Traditional Chinese tend to solve problems according to practical experiences rather than scientific methods. The desire for predictability causes resistance to alternative opinions or inconsistent evidence and perpetuates closed-minded attitudes toward new information. As a result, communication can be excessively biased toward preexisting perspectives.

The Behavioral Dimension of Self-Protection

In discussing parochialism, interviewees mentioned the lack of initiative to commu- nicate with culturally different others, the resistance to information disclosure, and the focus on facesaving, especially for coping with potential or actual threat and to avoid exposing deficiencies. This behavioral dimension is labelled as self-protection a way to maximize positive experiences for responding to uncertainties and threats to self-interests. Self-protection focuses on saving face to ensure positive selfviews, but it may fail to bring optimal outcomes.

The Relational Dimension of In-Group Focused Social Relationship

China's unique social structure causes the Chinese to favor in-groups tied by family, friendship, common traits and common goals. Less favorable treatment is afforded to out-group members lacking connections or common interests.

In-group closed-mindedness reflects the parochial tendency to avoid unpleasant cognitive conflict and to ensure that in-group circles remain harmonious. Data show that when highly parochial individuals deal with in-group problems or challenges, their closed-minded- ness allows them to be content with minimal standards, to resist change, and blindly trust in-group members.

Out-group closed-mindedness indicates that parochial individuals tend to avoid uncertainty by seeking quick solutions or rejecting different options when problems or challenges involve members outside their social circles. It could be found from the collected data that out-group closed-mindedness could motivate the pursuit of short-term gains, the search for shortcuts in solving problems, and distrust of out-group members.

In-group self-protection can be used to preserve self-image or save face when parochial individuals deal with problems involving themselves or in-group members. Parochial people tend to maintain face through 'face work' in front of others within the same social network, so they may make reckless, illogical, or irresponsible decisions just to maintain self-image.

Out-group self-protection is when parochial individuals defend self-interest and maximize self-benefits in reaction to perceived potential threats from out-group members, even with remote possibilities of receiving unwanted news or information. Out-group self-protection can lead to various selfish behaviors such as unwillingness to share with out-group members, lack of social participation, and disregard for common laws.

The three dimensions of closedmindedness, self-protection, and in-groupfocused relationships are interconnected. The relational dimension is particularly relevant to Chinese traditional thought that shapes interpersonal relationships, communication, and temporal considerations and interacts with the cognitive and behavioral dimensions.

PAROCHIALISM AND CHINESE FIRMS' GLOBALIZATION Employee Development

Chinese companies tend to feature patriarchal relationships in which bosses, usually men, play fatherly roles in developing subordinates. However, Chinese society is categorized as a low-trust society in which citizens tend to distrust out-group members. Managers tend to trust and collaborate with in-group members only to ensure safety and security for themselves. Due to outgroup distrust, relational networks and family Rosporch Highlight

ties rather than applicant capability usually determine whether workers are hired or promoted. Parochial managers innately distrust and are thus unwilling to empower employees. When mistakes happen, they tend to blame subordinates rather than take leadership responsibility. As a result, Chinese companies lack long-term investments in employee training, development and mentoring.

Parochialism leads to low trust, low employee empowerment and low employee engagement. Those consequences could be exacerbated when a company goes global. Chinese companies operating overseas tend to send Chinese managers and create a glass ceiling against non-home-based staff. If the organizational culture is infiltrated with parochialism, it will be difficult to attract and retain global talents, making the company less cross-culturally adaptable or competitive in the global market.

Communication

Parochial managers and employees impede intra- and inter-organizational knowledge sharing and learning because their closed minds prevent active communication and collaboration. Managers and employees who are focused on meeting their own needs first may withhold critical information from decisionmaking processes, believing that withholding information gives an advantage they can use to maintain their authoritative status. Foreign companies can encounter extreme difficulty in getting clear answers from their parochial Chinese partners. Chinese companies may avoid active communications with partners, especially when operations go wrong, such as late deliveries or quality issues. Even when questioned, such companies may deny or make excuses while resisting further improvement.

Without active communications and transparency, Chinese companies and partners cannot build trust and commitment for long-term strategic relationships. Thus, passive communication styles would prevent Chinese companies from communicating effectively with global stakeholders and building reputable brand images. Unwillingness to share, resistance to learning, limited transparency, and highly ambiguous communication styles could be a major concern for Chinese companies going abroad.

Customer Orientation

Parochialists tend to be content with minimal standards, in alignment with the mindset of achieving short-term gains and maximizing personal benefits. Chinese companies are known to substitute cheaper materials for qualified materials and to bypass required quality procedures to cut costs and increase profits quickly, thus sacrificing long-term relationships built on consistent service and quality. They are often content with minimum standards and find difficulty in implementing total quality management (TQM) practices for precise and consistent quality. Some Chinese companies also make reckless decisions without logical reasons or due diligence during acquisition bidding processes for overseas investments. They often offer the highest price just to outbid others, flaunt their wealth or save face. Such mentality leads to overpriced or completely unnecessary acquisitions. Facedriven decisions, falsified information, and unethical marketing approaches can destroy foreign investments of Chinese companies.

Social Responsibility

Highly parochial Chinese companies operating overseas are less interested in
building relationship with local communities and may disregard social norms, common law, and local legal and environmental requirements. Parochial Chinese companies take few CSR (Corporate social responsibility) initiatives. Our interview data reveal that they are less interested in building long-term relationships with local communities through community engagement, adherence to local legal requirements, and investment in CSR initiatives.

Strategic Planning and Innovation

The parochial elements of pursuing shortterm gains, resisting changes, and searching for shortcuts also impede the strategic growth of Chinese companies. Instead of investing in

R&D(research & development), many companies simply replicate successful business models and products as shortcuts for success. The 'copycat' strategy helps establish initial financial foundations. However, without original innovation, companies must constantly try to catch up with industry leaders and cannot sustain themselves as market players. The 'copycat' or fake culture greatly impairs their reputation. Many foreign alliances are reluctant to share key technologies because of the lack of intellectual property protection. 'Made-in-China' products are perceived as cheap and shoddy. Those perceptions will essentially prevent Chinese companies from advancing in the global value chain.

Managerial Implications

Under the influences of parochialism, some Chinese companies often make short-term decisions for quick returns but impair their long-term sustainability. They focus less on global talent development and are less likely to engage with their local employees and communities. Their foreign business partners may keep their relationships distant because Chinese companies lack transparency and open communication. Without focusing on the development of core competencies, parochial companies undermine innovative investments and quality standards and are often distracted by shortterm business opportunities. As they show little interest in CSR, they earn negative impressions overseas. Such behaviors are counter to the global mindset and universal values, and thus, hinder global adaptation.

By discussing parochialism as a particular side

of Chinese cultural tradition, positive elements of Chinese culture and traditions are often discounted. The three intellectual traditions of Buddhism, Taoism, and Confucianism contain ideas of balance, adaptation and moral compass that connect self-cultivation to fundamental ethical principles. At the same time, in the context of a temporary slowdown of globalization, it is speculated that the mindset of parochialism may not be limited to Chinese culture and firms. Revealing parochialism as a cognitive barrier preventing organizational learning, sharing and innovation in globalization processes, we hope to provide practical guidance for managers in their search for antidotes against the engrained and habitual parochialistic thinking and behaviors.

This summary is based on the full article, "Parochialism and Implications for Chinese Firms' Globalization", *Management and Organization Review*, 2019. DOI: 10.1017/mor.2019.12. Dr. Jing Betty Feng (fengj@farmingdale.edu) is an assistant professor of global business management at Farmingdale State College (SUNY), USA. Dr. Leigh Anne Liu (laliu@gsu.edu) is an associate professor of international business at George State University, USA. And Dr. Chunyan Jiang (cyjiang@nju.edu.cn) is a professor of human resource management at Nanjing University, PRC.



Agony and Ecstasy in the Gig Economy: How Independent Workers Keep Their Work Identities Alive

> It is crucial for an independent worker to actively cultivating a personal holding environment.

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E conomic volatility and technological changes have led more people to work outside of organizations, contracting with them or selling directly to the market in a fast growing "gig economy." Scholars have investigated identity work—the efforts people make to attain, hold on to, repair, or give up identities in organizations characterized by strong cultures, tight communities, and strict display rules, showing how people strive to fit into demanding roles without losing their individuality. However, for independent workers, in the absence of jobs designed by others, leaders who give meaningful direction, and collegial interactions, where do guides for action reside?

Crafting work identities are problematic for independent workers as they lack the secure affiliations and predictable futures deemed necessary to construct a stable identity at work. To understand how they craft work identities, the researchers conducted an in-depth qualitative study of independent workers who were facing chronic uncertainty about securing social and financial recognition, as well as about the stability and meaning of their work identities.

Sample and Data Collection

The researchers purposefully selected independent workers whose work had a high degree of autonomy and required some knowledge and creativity. Participants were recruited through acquaintances, networking events, and snowball sampling. The researchers sampled a variety of occupations, for example, artists, writers, graphic designers, consultants, executive coaches and IT workers, and kept interviewing until data collection and analysis stopped generating new themes. The final sample consisted of 65 participants in the U.S. (30 men and 35 women, from 27 to 74 years old, and with independent work experience from less than two years to more than 20 years). The researchers conducted semistructured interviews in person or by phone (90 to 130 minutes), asking about how participants defined themselves, their work, the challenges they faced,

and what made for a particularly good or bad day.

Data analysis and Findings

The analysis iterated between two stages: 1) synthesizing participants' experiences in a descriptive yet comprehensive fashion; 2) abstracting a theoretical articulation of the identity processes involved in their work. During analysis, researchers' observation of recurrent associations between working and living, distractions and anxiety, productivity and fulfillment led them to examine data through the lens of a systems psychodynamic perspective. This perspective focuses on the interplay between the management of emotions and tasks, and also offers useful construct of "holding environment", which refers to social contexts that reduce disturbing affect and facilitate sensemaking.

Absence of Organizational Holding Environment

In the minds of most participants, organizations are places where pay was secure, tasks clear, colleagues kind, and IT support efficient. At the same time, they described its structure as suffocating, bosses as controlling, and politics as running amok. Most participants denigrated such employment as demanding too high and too personal a price, evoking the image of a cog within a huge organizational wheel or a cage constraining freedom. One participant called himself a "refugee from the office", and another said that "I'll have to be heavily medicated" if have to work in organizations again.

These claims imply, in contrast, that working independently was daring, unconventional, freeing, and a "detox." However, without the buffer of an organization, participants were directly exposed to the volatile market. Their outsider positions demarcated a void that led them to think deeply and feel strongly about what their work meant to and said about them.

Work and identities are precarious

Independent work involves substantial uncertainty

about one's ability to secure a steady stream of work and the identity that goes with it. Most participants expressed economic and social concerns, which were intertwined as a network needs to be maintained to procure work and one's claim to a work identity rests on the ability to get paid for the work. As a writer suggested, when you got paid for writing, "then you are a writer."

Precariousness also raised existential concerns about the stability of these worker's self-definitions and the meaning of their work. One graphic designer said, "I wouldn't have to work if I didn't want to. But how would I then define my life?" A consultant similarly noted that "Working outside the boundaries [of an organization] throws people sort of out on their own reconnaissance a little more obviously. I'm conscious of being very interested in thinking about the reasons why I work at all and the meaning of my work."

Work and identities become personal

Without an organization mandating or directing it, all work reflected the independent worker's abilities and experiences. "My work becomes almost something I give birth to, and it becomes a companion," an artist said. A consultant noted that people like her "come to embody the work. It becomes part of our identity. It's who I am in the world." Independent work also afforded and demanded more than self-expression—it was an avenue for self-development that allowed them to overcome past challenges or limitations and pursue aspirations.

With work being so personal, others' feedback and one's own judgments felt very self-referential. One writer explained: "You become your work very much. When you achieve it, it's really great, and when you didn't achieve it, quite frankly, it's a failure." Personalization is hence a double-edged sword—self-expression goes hand in hand with personal exposure to evaluation and judgment.

Producing Work and Identity amidst Conflicting Emotions

Without an organization to provide direction

and support, and given the freedom to define why, how, where, and when to work, doing enough work and the right kind of work was associated with both anxiety and fulfillment. As working, rather than belonging, became the main avenue for participants to define themselves, productivity became the foundation on which their identity rested and a constant preoccupation for participants.

Given such significance, productivity became a conduit for intense and conflicting emotions. Like a lightning rod of sorts, it attracted emotions brought to the surface by participants' circumstances, and channeled them toward their work and identities in ways that could enrich or disrupt both. A software engineer said: "It's really dramatic working alone, you know? It's really, really emotional work in a lot of ways. It's emotional because you own it, because you own your future. Every single day, you own your future. . ." Being distracted and unproductive, conversely, often leads to anxiety, self-blame, and sense of failure and loss.

Cultivating a Personal Holding Environment

Lacking the structure, direction and community of an organization, the independent workers benefited from putting effort into cultivating four types of connections that helped them keep doing the work on which their identity rested and work through the anxieties (the "dark nights") created by working in this manner:

Connection to Personal routines. Sticking to daily or weekly routines constrained participants' working selves by demarcating the boundaries of working and non-working time, bolstering their discipline, and helping them to keep up with the tasks when their intrinsic motivation flagged.

Connection to physical places. Establishing a personally relevant physical work space helped to confine independent workers working selves, buffering it from distraction and helping them to invest in work. For many, the work space might be tight in the physical sense, but offered a spacious psychological state conducive to concentration and

inspiration. Participants described their workspace, such as home offices and library, with words like "fighter pilot cockpit" and "a temple", implying work as sacred, exciting, and potentially dangerous.

Connection to significant people. Maintaining connection to people who encourage independent workers to pursue the work, sooth their emotional tensions, and embolden them to let the emotional tensions inform their work was also crucial to participants' productivity, creativity, and, on occasion, their sanity. Such connections allowed them to be less anxious and more daring in their work.

Connection to a broader purpose. Purpose served as a barometer for deciding whether to say yes or no to a specific gig, and elevated participants above their daily struggles into a place where they could grasp the broader impact and significance of their work. Maintaining a connection to a broader purpose also helped independent workers to reframe their struggles. "[When] you think about the bigger picture," noted a writer, "it really allows you to reframe failure in terms that go beyond 'I wasn't good enough'".

Viable work identity and vital self

These self-created holding environments helped participants to manage emotional tensions, remain productive, and develop viable work identity, which, in turn, gave them confidence in their ability to sustain their working life and work identities. Viable identities, in turn, rendered precariousness they experienced more tolerable.

The holding environments also helped participants to experience the vitality of their working self the sense that they could be fully alive, present, and authentic in their work. Over time, participants interpreted emotional tensions as valuable features of their working lives, as markers of courage, and as sources of learning and growth. As one participant noted, working independently "is taking a risk but really creating the life that you most want".

Managerial Implications

If you are an independent worker, actively cultivating a personal holding environment is crucial. All four types of connections are needed to maintain the viability of identity and vitality of the self in balance. If you only have routines and places, which often bind rather than liberate the self, you might feel stuck, bound to the work but lacking a sense of possibility or growth. If you only have significant people and purpose, which liberate more than bind, you might have a vital self without enough of a viable identity, feeling inspired and free yet unable to get work done.

As more people become untethered from organizations, neither identities nor holding environments are simply lost or found once and for all. Rather than hold on to the illusion that anxiety will dissipate if only contained and interpreted well enough, it is more important and potentially fulfilling to live and struggle well with the anxiety of precariousness and the realities of personalization.

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How Does Politician Turnover Affect Foreign Subsidiary Performance?



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Haibin Yang City University of Hong Kong Rewritten by original authors As a kind of political risk, politician turnover brings great challenges to the operation of foreign subsidiaries.

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ultinational enterprises face significant political risks in the host countries. On the one hand, these political risks can come from discrimination, policy restriction or change of the host government to the foreign subsidiaries. On the other hand, they can also come from the political agents-- the government officials who make and implement policies. In the context of economic transformation in China, the political risks brought by government officials are particularly significant, because the Chinese government adopts the official rotation mechanism and uses GDP growth and a unique promotion system to manage government officials. In this study, we conduct an in-depth study of how government official turnover affects the operation of foreign subsidiaries and how they respond to such uncertainty in China.

Politician turnover increases information asymmetry and policy uncertainty

Because different government officials interpret and implement policies in different ways, a successor may prefer different things from the former official. They may adopt different policies to attract foreign investment or supervise foreign enterprises. As foreign enterprises often lack the information about the newly appointed government officials, they face great political uncertainty. This political uncertainty will increase the risk of foreign subsidiaries' investment in the local area, affect the sustainability of their ongoing operations, and hinder their response to policy changes and other external shocks in a timely and effective manner, all which will hurt firm performance.

For the Chinese market, the consequences of such political uncertainty is particularly significant for three reasons. First, the promotion system of Chinese government officials focuses on the pursuit of GDP growth, which strongly encourages government officials to actively participate in the important economic activities within their jurisdiction and exert influence on firms. Second, the rotation system itself determines that the actual tenure of officials is short and turnover frequent. Third, the promotion system also forces government officials to make horizontal and vertical comparisons. For example, the promotion of a municipal Party Secretary depends not only on the comparison with other municipal Party secretaries, but also on the comparison with the former municipal Party secretary. Therefore, government officials have a strong incentive to adopt economic development policies different from those of their predecessors.

How to reduce information asymmetry and policy uncertainty?

How can foreign subsidiaries deal with the political risks and uncertainties brought by politician turnover? We investigated the role of three factors, namely, the promotion mode of government official, the source of information for foreign enterprises, and the external information market environment, in reducing information asymmetry.

In the Chinese government system, there are mainly two promotion modes, one is internal promotion, that is, from the chief executive (governor / mayor) to the secretary of the Party committee within the jurisdiction. The other is external promotion. As the internally promoted new officials are often more open to the local foreign subsidiaries and have greater tendency to continue policies compared with the externally promoted ones, the foreign subsidiaries is less likely to suffer information asymmetry.

In terms of source of information, foreign subsidiaries often lack direct interaction with local governments or the knowledge of local institutions. On the other hand, local enterprises have a deeper understanding of local government policies and official preferences, and may even have close personal relationships with government officials. Therefore, it might be easier for the local firms to obtain internal information in the period of politician turnover. As a result, making alliance with local enterprises can help foreign companies to gain information and reduce the negative impact of politician turnover.

With regarding the external information market, market intermediary organizations would directly affect the smooth flow of market, law, politics and other information. Where the market intermediaries are perfect, even if politician turnover causes policy uncertainty, enterprises can obtain relevant information through industry associations, legal companies, and audit service agencies, which can effectively reduce the information asymmetry between the government and foreign subsidiaries.

Data, Analyses, and Findings

We examined nearly 80,000 foreign-funded enterprises in 310 cities in China between 1998 and 2007. We chose this sample because (a) the developing market system of China provides a dynamic context for the study of the relationship between government and enterprises; (b) there are many kinds of foreign subsidiaries in China; and (c) the unbalanced development of different regions in China provides a diverse institutional environment.

We collected data on the politician turnover in

the region where the companies are located, the performance of the foreign subsidiary (probability of failure - Statistics on whether to withdraw from scale enterprises due to performance decline; total factor productivity), whether the government officials are promoted internally, whether foreign subsidiaries are joint ventures, and the development of the intermediary service market at the city level. In order to eliminate the confounding effect, we included several control variables: firm age, firm size, firm liquidity, return on assets, growth of industrial sales, regional GDP growth rate, entry rate of multinational companies, official age, official gender, and official experience. We used the discrete-time logistic regression model to estimate the probability of enterprise failure, and use the fixed effect regression model to estimate the total factor productivity model. We also test policy uncertainty by analyzing the local government annual reports.

We found that politician turnover increased the possibility of performance decline of foreign subsidiaries, as well as reduced their total factor productivity. In addition, the negative impact of politician turnover was significantly weakened when the promoted official was a local official, or when the foreign subsidiaries made alliance with local enterprises, or when the intermediary service market is more developed.

Managerial Implications

As a kind of political risk, politician turnover brings great challenges to the operation of foreign subsidiaries. Findings suggest that managers of foreign subsidiaries must pay close attention to the uncertainty brought by politician turnover. Managers need to formulate effective response strategies in advance, such as looking for local partners, forming partnerships with local enterprises, or trying to invest in regions with good market intermediary services. Only by taking precautions to avoid or mitigate the uncertainty brought by politician turnover, can we ensure a more sustainable and stable development of foreign subsidiaries.

This summary is based on the full article "Does politician turnover affect foreign subsidiary performance? Evidence in China", *Journal of International Business Studies*, 50(7):1184-1212, 2019. Weiguo Zhong (zwg@gsm.pku.edu.cn) is an Associate Professor at Peking University. Ya Lin (lisalin2015@hkbu.edu.hk) is an Assistant Professor at Hong Kong Baptist University. Danxu Gao (0020174002@cufe.edu.cn) is an Assistant Professor at Central University of Finance and Economics. Haibin Yang (haibin@cityu.edu.hk) is a Professor at City University of Hong Kong.

Does Lean Improve Labor Standards? Management and Social Performance in the Nike Supply Chain



Lean manufacturing can have far-reaching positive effects on social performance.

Multinational firms face the ongoing challenge of making sure that their global supply chains are ethical with respect to social standards. Socially irresponsible practices in the supply chains may expose these firms to the risk of negative financial shocks associated with activist campaigns and the disclosure of socially harmful behavior. Therefore, in the absence of a strong system of global justice and regulations from many local governments, primarily in developing countries, finding effective approaches to improve social performance of upstream business partners has become an imperative in multinational management.

A prevalent strategic action multinational firms take is to adopt social compliance programs, in which supply chain "Codes of Conduct" are enforced on suppliers through private audits and the threat of external sanction. However, research has repeatedly shown the limited effectiveness of these programs in improving corporate social performance. One important critique of these programs is that they decouple compliance activities from core business practices and limit their impact on supplier social performance. In light of such critique, the authors explored an alternative approach to improve social performance in global supply chains: lean manufacturing.

Research Setting

The authors analyzed lean manufacturing in the Nike supply chain. Nike has promoted the adoption of lean manufacturing in its apparel supply chain since 2008. This program has provided training in lean manufacturing to supplier management, encouraged the adoption of these management practices, and verified that supplier production lines satisfied a set of lean standards. Adoption of this production system required significant changes to the organization of production, worker participation, and management systems. By November 2015, Nike had contracted with 396 apparel factories across 40 countries, employing over 370,000 workers. In general, these factories were larger plants with preexisting sourcing relationships to Nike.

Why does Lean Improve Social Performance?

How does lean, the proximal objectives of which are to develop the day-to-day management capabilities of suppliers and improve manufacturing performance, result in improved social performance? Why does Nike's lean program, without training suppliers on meeting social standards or raising social performance demands beyond those applied to other suppliers, have the side benefit of improving labor standards?

The social effects of lean in the developing world are contested. Some research suggests that pressures to adopt lean manufacturing and develop fast turnaround capabilities have led to a deterioration of working conditions in emerging market suppliers, such as longer working hours, lower wages, and more precarious employment. However, the authors posited two potential mechanisms linking lean to higher social performance, one stemming from changes in labor relations and the other from new management systems.

Building high-involvement work systems through lean. Lean manufacturing includes elements of highinvolvement work systems, in which workers are granted significant new responsibilities in comparison to the routinized tasks of traditional mass production.

Lean manufacturing includes elements of highinvolvement work systems, in which workers are granted significant new responsibilities in comparison to the routinized tasks of traditional mass production.

In the Nike system, workers were trained to conduct in-station quality inspection and to communicate problems to supervisors and coworkers. They were also trained to halt production upon discovering major quality problems. Workers also became responsible for cleaning and arranging their workstations according to the 5S demands. Such high-involvement work requires firms to enhance incentives to motivate employees' discretionary effort and increase investment in worker training, raising the costs of worker turnover. As a result, managers may have an incentive to improve terms of employment, such as wages and benefits, to retain and motivate skilled employees.

Building new management systems through lean. Lean emphasizes the development of process improvement capabilities. In the Nike system, the production line must satisfy a set of lean standards, such as tracking appropriate metrics for safety, quality, delivery and cost, and utilizing standard work. Such modern management systems associated with lean provide the tools to correct potentially flawed management processes to ensure compliance, reducing the marginal cost of remediating violations of workplace standards. As a result, firms may see improvement in technical areas of compliance, such as hazardous materials and emergency egress, which may improve work conditions, for example, employee health and safety.

Data and Empirical Strategy

The authors used panel data from more than 300 factories in Nike's apparel supply chain across 11

developing countries between 2009 and 2013. Although no factory had adopted lean at the beginning of the sample period, approximately 20% of factories had implemented lean before the end of the sample period.

Social performance, including health, safety, and environment (HSE) and labor, was measured by audits based on auditor inspection of conditions in factory buildings, interviews with workers and managers, and review of legal documents, timesheets, and wage records. These audits summarized factory compliance using a four-point scale, in which A or B indicated no serious violations of the standards, and C or D showed serious system failures and failing to show improvement. To address concerns about unobserved confounding factors and selection bias, the authors used difference-in-differences estimates, identified by within-factory variation in lean adoption over time rather than cross-sectional differences between plants.

Findings

Effects from changes in labor relations. The authors found that lean's effect is predominantly on labor standards, through building high-involvement work practices. Adoption of lean manufacturing practices led to a 15 percentage point reduction in noncompliant labor grades. This finding is robust to alternative specifications, including controls for divergent labor market trends across countries, controls for increased monitoring and enforcement by Nike, and an examination of pre-trends among the lean adopters. The most important workplace practices for predicting labor compliance grades are related to employee compensation and hours, especially accurate payment

of wages, one day off per seven days of work, provision of legally mandated benefits, time-keeping for work hours, and keeping work hours under the maximum limit.

The estimated modest effect of lean on HSE compliance was not supported by the data and more sensitive to specification choices. It is possible that HSE compliance requires structural changes to the plant, such as constructing new fire exits, changing wiring, or investing in pollution mitigation equipment. Such changes may be more costly and slow changing than adopting new practices in worker hiring, compensation and hours.

The role of country. Do the effects of lean on labor standards differ across countries? The authors found significant heterogeneous effects by country. In India, Malaysia and Thailand, any lean adoption is associated with improvement of over half a letter grade in labor compliance. The effect in Vietnam is smaller but statistically significant. However, in China, Sri Lanka, and the pool of remaining countries which occupy less than 5% of the sample, lean did not improve labor standards significantly. The authors proposed two possibilities on the absence of an effect in China. One possibility is the lower intensity of lean adoption in China, which fails to reach a certain threshold level of adoption to activate the effects of lean on social performance. In China, six of the 16 lean adopters had less than 33% lean lines. In contrast, all 12 Thai lean adopters, nine of ten in Malaysia, and all three in India had more than 33% lean lines. The other possibility is that features of China's industrial workplace, such as the absence of institutions facilitating worker voice and trust, create barriers to the development of high-involvement work system.

Boundary of lean's effect. Learning from the best practice of Nike, multinational firms should also recognize the boundary of lean's effect, such that it may be limited to large buyers who have more resources to support training programs. The scale of their orders makes it easier to persuade suppliers to invest in implementing new management systems. It also likely works best for suppliers with longterm business relationships and high levels of trust in buyers' commitment to continued sourcing.

Managerial Implications

This study suggests that lean manufacturing, an intervention used by multinational firms to develop management capabilities of suppliers in their global supply chains, can have far-reaching positive effects on social performance. When multinational firms search for effective approaches to improve suppliers' social performance, they should move beyond simple models of audits and the threat of external sanction and think more innovatively.

Moreover, diverging from traditional social

compliance programs, capability building through lean provides a specific opportunity to create "shared value" in global supply chains, such that both the buyer and supplier have incentive to cultivate and sustain new management practices and can derive both manufacturing and social benefits from it. Therefore, lean manufacturing may represent a form of self-enforcing institutional change that supports improved working conditions in emerging markets.

This summary is based on the full article, "Does Lean Improve Labor Standards? Management and Social Performance in the Nike Supply Chain", *Management Science*, 63(3): 707-728, 2017. Greg Distelhorst is an Assistant Professor at the Centre for Industrial Relations and Human Resources and the Rotman School of Management at the University of Toronto. Jens Hainmueller is a Professor in the Department of Political Science and Graduate School of Business at Stanford University. Richard M. Locke is Provost and Schreiber Family Professor of Political Science and International and Public Affairs at Watson Institute for International & Public Affairs, Brown University. The rewriter Lan Wang is a tenure-track Associate Professor at International Institute of Finance, School of Management, University of Science and Technology of China.

Use the 'Reset Button' Wisely: How Performance Tracking Change Employee Motivation



The use of performance 'reset buttons' can improve or undermine employee motivation and future performance depending on their past performance.

ave you tried different ways to improve employee self-efficacy and performance? While the most common method might be 'performance appraisal', in the era of big data and the so called "quantified self", where individual performances can be easily tracked, performance feedback has become more ubiquitous than ever. Companies have begun to revolutionize performance management by making use of advanced technology, such as employee monitoring software, tracking devices, and feedback-tracking apps, as well as adjusting methods of providing performance feedback. Technology enables managers to deliver and refresh feedback at a higher and more flexible frequency without being restricted by traditional monthly, quarterly and yearly cycles. Thus, it is important for managers to be aware of the impact that performance tracking may have on employee motivation, namely, to leverage the power of the 'reset button'.

The Reset Button and Its Effects on Work Motivation

The 'reset button' in performance appraisal refers to a 'performance reset', that is, regardless what happened in the past, one's performance metric gets restarted from this moment on. Common examples in the work environment include sales tallies, billable hours, or customer satisfaction index being reset to zero at the beginning of a calendar cycle, performance evaluations starting anew when a new manager joins the company, or performance records being tracked from a clean slate when evaluation standards change due to reorganizations. Beyond the workplace, performance resets also occur in other contexts. For example, a new student's grade point average (GPA) may be tracked independent of her past GPA in the old school, or a user of a fitness device like Fitbit may have her exercise statistics reset to zero at the beginning of each week.

How would performance resets affect employee work motivation and future performance? The author of this paper, Professor Hengchen Dai at UCLA argues that it depends on employees' past performance. Specifically, following weak past performance, a reset will reduce employees' tendency to base their self-efficacy on past failures and thus make them feel more confident than they would. Similarly, following strong past performance, a reset will reduce employees' tendency to base their self-efficacy on their past successes and thus, make them feel less confident than they would. She conducted three experiments and one field study of 40year data of American professional baseball players to demonstrate the importance of past performance in shaping the relationship between performance reset, work motivation and future performance.

Empirical Studies and Results

Experiment 1: Word Search Mission

Two hundred and two participants participated in ten

The use of performance `reset buttons' can improve or undermine employee motivation and future performance depending on their past performance.

one-minute Boggle games. In each game, participants were presented with a 3x3 grid with nine letters, and were asked to search for words that met certain criteria. Participants were offered a bonus based on the total number of correct words they could find across 10 games. After each of the first five games, all participants received performance feedback in a graph, which showed their score for each completed game as well as their average score across all completed games. Information about peer performance was provided so participants could assess their own performance. After five games, some participants were randomly assigned to the reset condition in which their scores for the next five games were displayed on a clean graph without their past performance on the first five games and their average score became zero; other participants in the control condition continued seeing their performance being tracked across 10 games. Notably, all participants were paid based on their overall performance across 10 games, and the reset only changed how scores were tracked and displayed without altering financial incentives. Notwithstanding, participants with weak past performance in the first five games did better if they had a reset than if they did not have a reset, whereas those with strong past performance in the five new games did worse if they had a reset than if they did not.

Experiment 2: Personal goal pursuit and psychological mechanisms

Three hundred sixty one participants participated

in this experiment on October 1, 2017. Participants first indicated a specific positive activity that they wanted to develop the habit of doing every day but did not do on the day of the experiment, for example, walking at least 5,000 steps and sleeping by 11 pm. Then they were asked to imagine that they had begun to work on this habit three weeks ago and had been using an app to keep track of their progress. The app allowed them to report whether they did the focal activity every day and depicted their progress with the aid of a calendar. Specifically, on the calendar, participants received a green dot for each day they successfully completed the focal activity, and a red dot for each day they did not. Consecutive green dots formed a streak, which would be broken by failing to complete the focal activity on a successive day. The app also displayed people's current streak (in days). Participants were presented with five progress reports and were asked to imagine that they received these progress reports over the course of the past three weeks. In the strong past performance condition, participants were told that they are consistently engaged in the focal activity whereas in the weak performance condition they did not. Participants in the reset condition were told that the app tracked their progress in October independently of their progress in September, so the progress calendar was clean and current streak was reset to zero; participants in the control condition were told that their progress would

Research Highlights

The 'reset button' in performance appraisal refers to a 'performance reset', that is, regardless what happened in the past, one's performance metric gets restarted from this moment on.

be continuously tracked from September to October. In this context where individuals pursued personal goals without concerns about financial incentives or reputation, the author found that individual selfefficacy was jointly determined by past performance and "reset" opportunity and subsequently influenced motivation to do the focal activity: following weak past performance, the reset increased self-efficacy and motivation; but following strong past performance, the reset decreased self-efficacy and motivation.

Experiment 3: Word unscrambling task and psychological mechanisms

Four hundred and eight participants were asked to perform a word task involving unscrambling letters to form English words. They were told that in addition to base salary, one of five participants would be randomly selected to obtain the total amount they earned during the study. For each trial, participants had 30 seconds to generate as many words as possible using a string of five or six letters. Participants were also told that the program would determine whether their performance met researchers' expectation for each trial and provide feedback after every three trials. After each of the first 12 trials, participants were told the actual number of correct words they generated, but the author manipulated participants' perceptions of their past performance by presenting different versions of feedback on whether participants met researchers' expectations. In the strong past performance condition,

participants received positive feedback on ten trials whereas in the weak past performance condition, they received positive feedback on only four trials. After that, participants in the reset condition were told that their performance for the next 12 trials would be displayed on a clean graph without previous performance, whereas participants in the control condition were told that their performance for the next 12 trials would be displayed on the same graph with their performance on the first 12 trials. To measure motivation behaviorally, participants were given an opportunity to switch to a different task that had a different pay structure. The purpose of such design was to mimic a common work situation in which employees choose to either keep working on a project or switch to a different one. Results show that participants' motivation to exert effort in the focal task, for example, the word unscrambling task, and their subsequent performance on the task were affected by the reset manipulation-a mere separation of past and current performance in the feedback interface—as well as by their perceptions of past performance. Again, self-effcacy mediated the effects of a reset and past performance on motivation and future performance.

A Field Study of Major League Baseball Players

The author then conducted an archival study of Major League Baseball (MLB), a professional baseball organization in the United States and Canada. Sport settings have often been used to study organizational behavior, particularly motivation

and performance because of the availability of highresolution, longitudinal performance data, the highstakes nature of individual and team performance, and the suffcient contextual overlap between sport and other organizational settings. MLB consists of two leagues. When players are traded across leagues in the middle of a season, their season-to-date statistics are reset and tracked from a clean slate in the new league; when players are traded within the same league, their season-to-date statistics are not reset. Thus, comparing these two types of trades can provide some insights on how resets affect players' behavior. Play-by-play data for all MLB players from 1975 to 2014 regular seasons, as well as correlative information about trades, were obtained from Retrosheet's event files and transaction database. Among those 701 trades, 42.23% were cross-league trades. Using summarized statistical analysis, regression analysis, and robustness checks, the author showed that a player's past performance prior to a trade moderated the effects of a performance reset on post-trade performance. Specifically, cross-league trades associated with performance resets can improve hit probability more than within-league trades can when players' pre-trade batting performance was weak; however, cross-league trades associated with performance resets may lead to worse performance than within-league trades when players' pre-trade batting performance was strong.

Managerial Implications

The findings of this paper clearly suggest that the use of performance 'reset buttons' (performance resets) can improve or undermine employee motivation and future performance depending on their past performance. How to reset well-performed employees' performance without damaging their enthusiasm and future performance? How to give underperformed employees the opportunities to 'reset' their performance, better coping and recovering from the poor performance? One implication of these findings is that managers can help employees psychologically cope with negative performance feedback by offering them the option of resetting their performance statistics merely for the tracking purpose, for example, allowing employees with low daily sales to track their performance in a new week from a clean slate. When given a chance to put past performance failures behind them, employees may not decrease self-effcacy but recover more easily from poor performance. Employees given such a reset option may feel more confident and empowered, even if the reset only affects how their performance is presented.

On the other hand, for workers who perform well, such reset may decrease their confidence and feeling of competence in doing their job. Thus, managers should not apply the "reset button" in these cases, but instead, communicating encouraging comments and positive expectations to them.

In conclusion, managers should be aware that performance resets affect employees differently depending on their past performance. By recognizing that performance resets do not affect all individuals equally, organizations and managers can better harness the benefits and avoid the disadvantages of resets.

This summary is based on the full article, 'A double-edged sword: How and why resetting performance metrics affects motivation and performance,' Organizational Behavior and Human Decision-Making Process, 148 (2018), 12-29. Hengchen Dai (hengchen.dai@anderson. ucla.edu) is an assistant professor at University of California, Los Angeles. Rewritten by Monica Ren, an assistant professor at Macquarie University, Australia.

The Emergence of Socially Responsible Investment Funds: The Paradoxical Role of Financial Logic





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How does financial logic of a society promote or stifle the emergence of SRI funds?

t is widely known that investment funds pursue opportunities that maximize financial returns. It seems unrealistic to expect investment funds to engage in social endeavors and to make this world a better place. Nonetheless, socially responsible investing (SRI), a hybrid form of investing that incorporates nonfinancial concerns—such as environmental, moral, and social considerations—into investment decisions, has emerged as a promising and potentially impactful alternative to mainstream financial investment practices. As such, SRI seeks to achieve both high financial returns and positive social impact.

At first glance, SRI seems to be at odds with the financial logic, which underlies investment funds and focuses on individualistic value and profit-maximization. Therefore, one might expect that SRI to be more common in societies where financial logic is less prevalent—that is, fewer people focus on individualistic value and profit-maximization. Nonetheless, North America and Western Europe—where financial logic seems to be highly prevalent, turn out to host the greatest number of SRI funds. How does financial logic of a society promote or stifle the emergence of SRI funds? And relatedly, what are the other societal factors that lead to higher or lower foundings of SRI in a society?

Financial Logic: Its Means and Its Ends

The authors suggest that, by distinguishing the means from the ends of financial logic, we could better understand the conditions under which financial logic complements or contradict social goals and hence promote or suppress the emergence of SRI.

On the one hand, transferrable resources from the financial logic, such as financial experience and skills,

may provide the means to facilitate such founding. As one SRI professional put it, "I have been in this industry for 20 years. What I do now is to apply finance skills in areas other than large banks. In social sectors, [these] skills are badly needed." On the other hand, legitimacy constraints enforced by the ends of the financial logic may decrease SRI founding in countries where the financial logic is more predominant.

Thus, paradoxically, the financial logic could simultaneously aid and constrain the founding of SRI funds. Which of the two effects has a greater impact on such funding likely depends on the prevalence of the financial logic in society, with the constraining effect being stronger at higher levels of prevalence.

The Prevalence of Financial Logic and the Emergence of SRI funds

Founding an SRI fund always requires some resources from a financial logic, typically available only in a society in which finance is at least modestly prevalent. Robert Zevin, a SRI pioneer in the U.S., was already a financial expert when he started his own SRI firm; as a Harvard economics Ph.D., he was among the first fund managers to use modern portfolio management theory and was deeply familiar with the resources provided by finance. When financial resources are scarce, few SRI foundings are expected. One SRI expert attributed the marginal presence of SRI in emerging economies to the undeveloped nature of their financial markets and institutions. As she explained, one does not expect SRI to emerge "when the stock market and major pension funds are immature and the regulatory processes need time, and potentially a lot of time"; in those cases, "to develop SRI is simply too exotic."

North America and Western Europe—where financial logic seems to be highly prevalent, turn out to host the greatest number of SRI funds.

However, in societies where the financial logic is highly prevalent, even if the resources conferred by that logic are plentiful, those resources are less likely to be diverted toward financial organizations with goals other than profit maximization because their goals may be categorized as deviant and thus illegitimate. When maximizing financial returns becomes the only legitimate end goal in the financial sector, nonfinancial goals are considered inappropriate. Thus the financial logic may reduce considerably the number of SRI founding.

In contrast, in societies with moderately prevalent financial logic, various material and cultural means provided by the financial logic are portable and can be incorporated in a variety of organizations with multiple end goals. At moderate levels of financial prevalence, actors may be able to deviate from financial end goals yet still gain access to these means. In this case, alternative institutional forces may play a more complementary role with the financial logic in fostering novel financial ventures, and traditional financial actors and deviant players with different interests and identities will more likely be able to manage the rivalry of competing institutional logics through collaborative relationships.

Therefore, the authors suggest an inverted U-shape relationship between the prevalence of financial logic and the founding of SRI. That is, SRIs are most likely to prosper at societies with moderately prevalent financial logic.

The Impact of Union, Religion, and Green Political Parties

While the financial logic plays a dominant role in

the field of financial organizations, other institutional forces can also shape the dynamics of the field and thus contribute to the emergence of SRI.

Unions. The presence of unions represents not only an institutional force but also a set of organized actors who own financial assets and determine how such assets are invested. In December 2007, the largest international association of trade union organizations issued a statement on "Responsible approaches to the stewardship of workers' capital" and urged "pension funds, their trustees, and fund managers to include in their investment decision-making process the impact, both positive and negative, of their investments on workers, communities and the environment." The authors suggest that when the financial logic is not highly prevalent, the presence of unions may complement the financial logic to foster the founding of SRI funds.

Christianity. The first generation of SRI investors included mostly religious individuals and organizations who wanted to align their moral beliefs with their investment practices. Religion, specifically Christianity, also played a crucial role when SRI spread globally. As one informant put it, "Religion played a much more important role in SRI than is recognized. Many Asians who started green-tech funds were Christians. I see nothing essentially different between religious investors in Asia and in Europe or America." The authors suggest that when financial logic is not very prevalent, there is a positive relationship between a more widespread presence of religious values and the founding of SRI funds, as the means of the financial logic are deployed toward that end.

Green political parties. The strength of green political parties represents an institutional force that is

both cultural (affecting ecological sustainability) and coercive (tapping the power of the state). Green parties have rarely been in power, but they have occasionally been able to shape mainstream policy discourse and practice by forging alliances with larger parties. Even if green parties do not explicitly endorse SRI, they can foster a more SRI-friendly regulatory environment, for example, by supporting subsidies to green sectors. Therefore, when financial logic is not very prevalent, green political parties, with their strong environmental motivations in society, can help direct the means and resources provided by the financial logic to SRI.

Although unions, Christianity, and green political

parties can direct the means of financial logic to better serve the emergence of SRI, these positive effects likely exist only when the financial logic is not very prevalent. When financial logic is highly prevalent, the salience of union, Christianity, and green parties likely lead to a polarization of values and severe conflict with financial logic, which will make it more difficult to reconcile social and financial ends in the establishment of new SRI funds. In this case, the negative relationship between financial logic and SRI emergence becomes stronger.

By analyzing a panel database of SRI fund foundings from 1970 to 2014 in 19 countries, the authors found substantial support for their hypotheses.

Managerial Implications

At this point, SRI is still at its early stage in China. As of 2017, China has only about 60 SRI funds (among more than five thousand investing funds), with a total value of 50 billion Chinese Yuan. In comparison, the United States has more than 400 SRI funds back in 2017, with a total value of 12 trillion US dollars, representing more than one fourth of the assets under professional management in the United States. Such vast difference between China and the United States could be driven by many reasons, such as the relatively low prevalence of financial logic and the relative underdevelopment of financial market in China.

However, we can see at least a few positive factors that will contribute to the further development of SRI in China. First, similar to pension funds in the West, China's pension funds can also invest in financial market, thus directing more resources to the SRI funds. Second, with the revival of Chinese traditional culture and the growing sense of social responsibility among the new generations, we might expect an increasing number of investors participating in SRI funds, as well as financial experts with a strong social mission establishing SRI funds. Third, China's growing emphasis on environmental sustainability also facilitates investments in the areas of sustainability and an environmentally friendly economy. With these positive factors, we can be optimistic about the future of a significant SRI emergence, perhaps with a pattern of unique Chinese characteristics.

This summary is based on the full article, 'The Rise of Socially Responsible Investment Funds: The Paradoxical Role of the Financial Logic. *Administrative Science Quarterly*, 64 (2), 466-501' Shipeng Yan is an assistant professor at City University of Hong Kong. Fabrizio Ferraro is a professor and Juan Almandoz is an associate professor at IESE Business School. Junchao (Jason) Li is an Assistant Professor in Management at Rutgers Business School-Newark and New Brunswick, Rutgers University.

Safe or Profitable: Which Goal Should Firms Prioritize?



It is the relatively unprofitable airlines that are more motivated to keep their customers safe.

Most of us have wondered about the safety of air travel one time or another. Reports of accidents or crashes due to technical problems raise questions regarding how much airlines are doing to ensure safe air travel. Given the competitive nature of the industry, it is easy to imagine that airlines may be focused on keeping costs low to increase profitability. At the same time, passenger and crew safety is paramount to the success of any airline. Safety and profitability are both highly valued organizational goals that are often in conflict with each other because many safety activities are costly. So which goal do airlines prioritize – safety or profitability?

The authors empirically investigated the pursuit of safety and profitability in the global airline industry to find out how firms handle conflicting goals. The airline industry is an excellent context for analyzing this question because airplane models develop distinctive safety records that are used to determine the safety of an airline's fleet. Maintaining a fleet of aircraft containing models with a good safety record is an essential goal for airlines. By selling and buying airplanes, an airline can move to a safer set of models in its fleet. Although this approach aligns well with the safety goals of the airline, it conflicts with the profitability goals because aircraft transactions are very costly. So, while airlines have information about the safety of their fleets, the question remains whether they act on that information by spending money on acquiring safer airplane models.

Do airlines care about safety?

Fortunately for us, there is good news in this regard. According to the authors, safety goals are indeed crucial to airlines. Safety problems can have consequences that include reputational costs as well as the longer-term loss of customers. Airlines are motivated to address any discrepancies between their aspirational level of safety performance and actual performance. Accordingly, top managers act on safety records of their models and adjust the fleets based on their estimated accident risk.

How do airlines prioritize safety and profitability?

Airlines have to walk the fine line between upholding fleet safety standards and maintaining profitability. One might expect that airlines underperforming on their profitability goals would want to save money by continuing with their less safe fleets. Interestingly, the authors found that the opposite happens to be true. Airlines operating with poor profits are very concerned about fleet safety and more likely to act, while profitable airlines pay less attention to the issue. Although this might seem counterintuitive at first glance, the authors help us understand the intricacies behind such decisions. Airline passengers, employees, and insurance companies all react to airline accidents and penalize airlines that experience them. Top managers fear that further decline in safety can trigger accidents that in turn create a negative spiral of revenue shortfalls and cost increases, making the airline financially unviable. Even if no accident occurs, taking visible and conservative actions such as replacing airplanes may help regain trust in the airline. Thus, paradoxically, an airline with profitability so low that its survival is threatened will become risk-averse and react more strongly to the safety goal by selling and buying airplanes.

Methodological approach

The authors conducted a thorough empirical investigation of the global airline industry. They obtained data on aircraft ownership, sale, and ending (destruction, or storage) and aircraft accidents from the website http://www.airfleets.net. They also collected data on the subjective safety assessments of all the aircraft models from articles published in general outlets such as *The Economist, the Financial Times, Forbes, The New York Times, USA Today, The Wall Street Journal as well as airline industry publications such as Aircraft News, Aviation Week, and Flight International.* The final data contain 807 firm-year observations from 118 firms, of which 47% are in the United States and the rest are dispersed across the world, with most nations contributing one airline.

As expected, the authors found that safety goals were prominent when safety performance was low, as reflected in the buy/sell responses. Moreover, the data strongly indicates that low-profitability firms are focused on survival, as reflected in their stronger buy/sell responses when safety was below aspirations. Interestingly, the findings also suggest that while decision-makers may view objective indicators (such as hull-loss statistics) as the true safety measure, they also consider subjective assessments (such as media tenor) of its aircraft models perhaps as a separate public relations goal.

Managerial Implications

As air travel becomes an increasingly common feature of our lives, it is certainly good to know that safety is an essential goal for airlines and that they act to maintain it. They may not pursue safety out of the sheer goodness of their heart, but due to accountability to regulatory bodies, customers, as well as media scrutiny. What this means for us is to be aware and active to keep such firms on their toes. In addition, contrary to what we might expect, it is the relatively unsafe firms that are more motivated to keep the customers safe. While these findings might complicate our future flight booking decisions, they certainly offer critical insights for management theory and practice.

This summary is based on the full article "Safe or Profitable? The Pursuit of Conflicting Goals", *Organization Science*, 30(4): 647–667, 2019. DOI: 10.1287/orsc.2018.1280. Henrich R. Greve (henrich.greve@insead.edu) is the Rudolf and Valeria Maag Chaired Professor of Entrepreneurship at INSEAD. Vibha Gaba (vibha.gaba@insead.edu) is an Associate Professor of Entrepreneurship at INSEAD, Singapore. Misha Mariam is a Ph.D. candidate at University of Washington. She is also associate editor for the Research Highlight column of *Management Insights*.





A Value Finder in the Era of the "Listening Economy"

An Interview with Jianjun Yu, Co-Founder and Co-CEO of Ximalaya FM

Interviewers:

Yating Cheng & Yina Chu Fudan University o describe his experience of entrepreneurship, Mr. Jianjun Yu (thereafter Mr. Yu) chose the word "enjoyable" rather than "persistent."
After receiving the Masters degree from Xi'an Jiaotong University,
Mr. Yu took a crack at a variety of new projects, successively
setting up JieTu software, a street view project named "The City
Bar," and a virtual reality project called "The World", etc.

In 2012, Mr. Yu delved into the business of "listening," and Ximalaya FM—a mobile podcast App—was born. In an era that online video Apps dominate, how many people would be willing to use an online audio App? Mr. Yu did a survey among 100 friends and investors and found that 70% of them thought that this idea had no future.

That was the conventional thinking. However, Mr. Yu followed his own logic, and time has proved that he was right. Up to now, the valuation of Ximalaya FM has exceeded 20 billion RMB (about three billion U.S. dollars) and the App has attracted more than 470 million users.

Ten years ago, Mr. Yu's dream was to build an online platform that could attract more than 100 million users. Now, what he strives to do is making Ximalaya multidimensional: from online to offline, and from China to the whole world; exploring the application of AI voice interaction, and reforming how people get information.

"Everything has its own voice, and everything can talk to you. This is something that has great potential, and it is also the direction that we are exploring." says Mr. Yu.



MI: Before the establishment of Ximalaya FM, you had already had abundant entrepreneurial experience. How did this experience enable and influence you to start Ximalaya FM?

Jianjun Yu: Drawing lessons from previous experiences and implementing them into new projects can help you to avoid mistakes. I made too many mistakes before, so this project (Ximalaya FM) went relatively smoothly. I previously encountered many problems in different aspects—problems in the fields of human resource and organization management, critical decision making, strategic planning, etc. I have kept thinking about the solutions to these issues. For Ximalaya, generally speaking, so far it has not experienced many big adjustments only some small changes. An important lesson that I learnt from my past entrepreneurial experience is the importance of choosing the correct direction to start a business. While I was doing the street view map project "The City Bar", I felt that the direction was very cool because it could bring the whole city to the internet.

However, the problem with that project was that the innovation was not made from the users' perspective, but from a self-centered creator's perspective. This kind of problem always happens to entrepreneurs with technology backgrounds: you would think that you make a great product, but to what extent can it solve users' problems?

Every entrepreneur should consider the following three questions thoroughly before starting a business: Whose problems can this project solve? What problems can be solved? What are the typical usage scenarios?

When analyzing user demand, we need to consider three important aspects: strength, breadth and frequency. The strength of user demand can be categorized as rigid or non-rigid demands. Think about what your project means to users: is it the "fireplace in snowy weather" or just "icing on the cake"? The breadth of user demand can be categorized as mainstream or niche market. When I established Ximalaya FM, some people said it had no future because they thought there were few radio listeners in China, and meanwhile, the video sites had already provided abundant choices. In such a circumstance, who would listen to podcasts? Such is a conventional thinking. We chose to do it because we wanted to serve a niche market, where the giants do not care about. In addition, I predict that it is a niche market in the short term, and it will become a mainstream market in the long term. The frequency of user demand can be categorized as high frequency or low frequency. We could break into the market with high-frequency products, and use the free highfrequency products to gain customer loyalty as well as user retention. After that, we could gain profits through low-frequency products.

MI: In the past few years, what important decisions have you made?

Jianjun Yu: The most important decision was made in 2012. It was about choosing the business direction, which is the podcast. It was a niche



market in the first place, but it was a revolutionary point in the era of mobile internet, and it grew continuously from that point on. At the beginning, the podcast industry was not large enough to attract much attention from the giants, so we had the time and space to grow. When I first talked to the investors, I described Ximalaya FM as the podcast version of YouTube and Taobao. During the past six years since Ximalaya launched, this major direction has never been changed, and it has become more and more precise.

Another important decision was about talents—how to develop the top management team. To find the talents to form the team, we spent a lot of time and energy. Sometimes, we could only find the most appropriate talents through interviewing dozens of candidates. The selection depended on our understanding of "talent". We have been continuously thinking and making efforts to build up an organization that is both efficient and full of creativity. Our endeavors

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include setting up a company university, as well as the cultivation of company culture and value.

MI: Ximalaya FM was not the first one to step into the podcast area. How did it stand out from the crowd?

Jianjun Yu: From our perspective, simply integrating the traditional FM radio into the App was not what users want. Users need high-quality contents, and users follow the hosts rather than the channels. We emphasize that every host should focus on what he or she is good at so that users will obtain high-quality content via following this host. Starting from this unique point, the product that we finally brought to the users is very different than others.

Moreover, our logic of distributing content is not according to the previous experiences of the host. Instead, it is based on whether the users like the content or not. We have many algorithms to determine the popularity of the contents. This strategy enables the high-quality content to get more exposure and helps us find more talented hosts. Actually, we need to always think from the original point. Think about who your users are, and how to meet the users' demand.

MI: I am also a user of Ximalaya FM. Sometimes, when I search for a certain content, seven or eight different results would appear. I am wondering how users find highquality content more efficiently with the accumulation of contents? Jianjun Yu: The value of the App to the users has been reflected in the following aspects. First, between "have" and "don't have" (some content), we need to have "have". Second, after we "have" the content, we need to figure out how to find the best one. Obviously, this is a challenge for the App. As the content accumulates, it costs more for the users to identify the best content. It is similar to the situation when Taobao took off: with the fast increase of various goods sold on Taobao, the quality is inevitably varied a great deal. That's why Tmall, JD.com, and Netease Selected still had opportunities. It essentially followed the same logic. We cannot satisfy the users' needs of large amounts, high efficiency, high quality, and low prices all at the same time. When you satisfy their needs for large quantity, the needs of high quality might be affected.

What we are doing is to make our users experience the "high quality" first. This is why Ximalaya formed a team to create content rather than just relying on the user generated content(UGC). Many of our headline contents are developed by our own team and partners. We aim to prioritize the quality of the content. On the basis of high quality, the quantity will automatically increase. Thereafter, for the sake of users' convenience, we developed the AI speaker, which enables everyone to obtain the content by talking to the speaker without using a cellphone. From "high quality" to "large quantity" and then to "convenience," we focused on different aspects of the users' needs, and found ways to satisfy those needs. It was a slowly

evolving process, just like human evolution.

MI: Even a successful platform like Taobao which has been the leader in its area—may also meet challengers like Pinduoduo, which uses its own algorithm to captures a less noticed market: low-income people from lower-tier cities and towns. In the podcast area, how do you think of the competitors?

Jianjun Yu: You will never feel relaxed in the internet age. Alibaba is very strong, while it still has to face new competitors. You'll never know when new species will appear and threaten your life. "Dedao", "Fandeng reading", "Kaishu stories", and other podcast products came out recently and provide different services to different segments.

We did not prioritize competition because the market is still at an early stage of the evolutionary process. Even e-commerce, although it has been developing for 10 to 20 years, is still evolving. You need to take a historical perspective to consider this question. Don't focus too much on your competitors because they may also make mistakes. You should focus on the core needs of your users and think about how to fulfill those needs.

MI: Is there any overseas product similar to Ximalaya FM, which is already welldeveloped? FM in the market contexts of the U.S., Japan, or other countries, we are still leading the whole market in terms of innovation, the number of users, and so on. This explains why we marched into the overseas market last year. Our product is advanced overseas.

MI: In which countries has Ximalaya been launched?

Jianjun Yu: The United States and Japan.

MI: Is the operation logic in these areas the same as it's in China?

Jianjun Yu: The logic is similar, because people in different areas all have the same needs for highquality contents and same usage scenarios commuting to and from work, before sleeping, working-out in the gym, and doing housework. The only difference is that the contents vary from one country to another, as the contents in a certain overseas market will be provided by local people there.

MI: From content to hardware, the performance of the Xiaoya loudspeaker is excellent. What is the role and meaning of hardware in the ecosphere of Ximalaya?

Jianjun Yu: As I just mentioned, we not only focus on the quality and quantity of the content, but also on the convenience of purchasing the content. If we treat smartphones as our main battlefield, what will happen if smartphones disappear in the

Jianjun Yu: Not yet actually. Putting Ximalaya

future? It is likely that smartphones will become the televisions of today—they still exist but are not often used, or are only restricted to seniors and people in underdeveloped areas.

In the future—an era characterized as the "internet of everything"—if you want something, you only need to open your mouth. (It doesn't even need you to open your mouth because it can read your mind.) The logic will be totally different than that in the era of smartphone, and I believe it is likely to happen in the future.

Following this logic, we need to do research and be prepared for the future market in advance, so we began to make hardware to help users know and use our product more easily. The future scenarios will be that everything is connected to the internet and everything could speak. With this perspective, we developed the Xiaoya loudspeaker and Xiaoya OS to integrate our contents into household electrical appliances, such as sofas, massage chairs, refrigerators, and so on. For example, when we cook, the Xiaoya loudspeaker can tell us how to cook the dish. We will create contents connected to everyone's daily lives in the most convenient way. Up until this point, over 10,000 companies have been connected to our content library and use our content. Everything has its own voice, and everything can talk to you. This is an area that holds great promise in the future, and it is also the direction that we are exploring. Don't set boundaries for yourself; keep trying different possibilities, and then new products will grow constantly.



The Popularity of "Paying for Knowledge"

MI: The year 2016 is also called "the first year of paying for knowledge". Ximalaya developed very fast with the trend of paying for knowledge. What is your opinion on this subject?

Jianjun Yu: To a great extent, Ximalaya also contributed to the development of paying for knowledge. In June 2016, we launched the first pay-for-knowledge product: "Talking well" by Ma Dong (one of the most famous TV hosts in China). We encountered the following issue previously

when we were making free content: many people who have the market potential do not want to join us because they don't see any benefit in doing this.

The emergence of paying for knowledge meant that creators' value and knowledge could be transformed into financial rewards. The customers also got the opportunities to purchase some content that were not available previously. Our platform could gain part of the value by providing service to both sides, and this whole process formed a closed loop. This is the logic behind it. Essentially, it depends on how you detect the "pain point" and needs, and then find a realistic way to connect them.

To many scholars and teachers who are experts in certain areas, we provide them with the opportunity to share their knowledge with more people. In schools, a teacher may have only tens of thousands of students at most. Although there are more people who want to get the knowledge from the teachers, they just have no opportunity to do so. Traditional publishing industry is also supposed to solve this issue. However, the advantage of Ximalaya is that, we don't have printing and logistic costs, so the transmission of knowledge can be much faster and cheaper. The listeners can digest the content more easily, and the teachers may get more benefits. It enables people who create the content and who have the know-how to connect with customers more conveniently.

How successful we can be will depend on how well we serve people in different occupations, such as teachers, media professionals, and



experts in different areas. In the past, there were relatively few people who could publish a book. Many people who had the know-how didn't have the channel to share their knowledge with other people.

Now, through the internet, the cost has been significantly decreased. For example, if you are a product manager, you can teach a podcast course about how to become an excellent product manager. If you are a technical architect, you can teach a podcast course about architects. It is possible that there are more than 100,000 people in China who will like your content. We advocate "sharing human intelligence through voice", and hope high-quality contents could go beyond the limits of time, space, and language. If this can be realized, it would be very meaningful. For teachers, teaching 30 students in a class is also different from teaching 300,000 people in

terms of the sense of achievement.

Ximalaya has been in the area of paying for knowledge for over three years. From my perspective, the business model per se is correct. Connecting the creators of contents with the customers has realized better business value. The adjustment should focus on the tactics. For example, if a certain content made by a teacher is not what users particularly want, or if the users are not willing to pay, we may keep it free instead of insisting on paying, because this kind of content may still be worth spreading.

MI: How do you decide whether a product should be free or not?

Jianjun Yu: Based on my understanding, a simple rule is that pan-entertainment should be free, and pan-knowledge should be paid. Why are the majority of variety shows free? Because they have a large number of audience. It is not necessary to get profit from the audience as the effect would be better to charge the business clients. Therefore, when the target audience is the general public, this model of advertising is better; when it comes to a niche market, where the user base is relatively small, and the users have a stronger willingness to pay, then it is better to adopt the model of user-paid. This is the logic we use to make decision.

MI: What's the major source for Ximalaya's profit? Advertising or paying for knowledge?

Jianjun Yu: We use both models and do not

restrict the size of either one. I believe that while we are working in the internet industry, it's better to empty our thoughts to have a clean and clear mindset. First, you should forget your ego. Don't assume that you are correct; don't assume that it must be A or B. You need to plant a seed, and then let it grow. It will turn into a small tree slowly, but finally will become a big tree. We have both advertising and paying for knowledge. We also have live streaming and loudspeakers. You should do it when you believe there is value. Whether it can grow involves a verification process and is also related with your team.

From Management to Empowerment

MI: Do you have any experience and insights to share with regard to organizational management?

Jianjun Yu: In the industrial age, the management of workers in the assembly lines followed the hierarchical structure. The assembly lines were able to guarantee the quality of the core products; workers were just facilitators to make the manufacturing process go smoothly. In the internet age, especially in the knowledge economy, more and more jobs are replaced by knowledge workers. Individual creativity, engagement, and commitment became very critical factors.

The CEO of Google wrote a book called *How Google Works*. It mentions managerial empowerment, which focuses on giving power

to workers rather than managing them. The good internet companies in China are those that empower people very well. They have developed their own empowering systems, in which each individual could better realize their self-value and collaborate with one another more efficiently.

In the internet age, management has turned into empowerment; hierarchical management structure has evolved into platform-based structure. Through platform-based structure, organizations can maximize the synergy and effectively trigger individual entrepreneurial spirit, and at the end, the organization will become more vigorous.

In my opinion, the nature of a company is to form a system in which a group of people could collaborate with each other efficiently. We are thinking about how to create synergy in our organization and how to motivate individuals from within. For example, Ximalaya uses the "horse racing system". When there is an opportunity, we would post an internal reward to encourage as many colleagues as possible to think of their own plans and get prepared for the roadshow. We have an internal investment system. If somebody posts a good idea and earns people's trust, we will let him or her form a team and lead this team. The internal investment allows employees to build teams within the organization and conduct innovative projects. We are also thinking about how to prioritize rewards to those who "grow the crop", to motivate them create successful projects continuously.

within the organization?

Jianjun Yu: We follow the logic of making collective decisions, so we bring in a committee formed by eight or nine top executives. When there is a disagreement, we will thoroughly discuss the question first, because big decisions should be made based on a clear understanding of the question. When the question has been completely understood, we will make the decision based on the discussion. In exploring the unknown world, everyone sees unique aspects. It is just like using a flashlight to light up a dark house: you can only see the parts that are lit up. If we let everyone express their own opinions, different corners of the dark house can be all lit up. In this way, we can see every part of the house, just like the "blind men touching an elephant". It is a process to discover the unknown world, and different people focus on different spots. Indeed, this is a model of collective creation. As long as it is based on thorough discussions, we are able to achieve internal agreements.

Of course, everyone has his own personality and habits. This is the stubborn side of human nature. If it is impossible to reach an agreement, we will let it be tested by time. If you think it is like this, but I think it is like that, we can do an "AB test"—using a small size of sample, such as 50,000 to 100,000 users—to get the feedback. This method is just applicable to tactic aspects; vital decisions are still always made through discussions.


to give to new entrepreneurs?

Jianjun Yu: I started my entrepreneurship journey in college. After finishing the first and second projects, I felt that entrepreneurship fit me the best. I have never thought of giving up, but more of how to survive and thrive.

From the perspective of entrepreneurship, the most important thing is your original intention. No matter how big or how successful you want to be, you need to make sure that you like what you are doing. I once thought: if I am still unsuccessful when I am 50 or 60 years old, what will I think of my work? If I can accept this situation with ease and feel that I have tried my best, I will still be happy for myself. If the original intention is to get rich quickly, or just want to have a try as others around are successful, then I feel it will be hard to succeed.

Internet startups need to overcome many obstacles, so it is hard to succeed by relying on just persistence without enjoying the process. Using the word "persistence" means that you feel it is painful and difficult. You should enjoy the entrepreneurship process just as you would when playing a video game. Failures are fine; just try again. You should have this attitude.

MI: What do you expect Ximalaya to become in the future?

Jianjun Yu: We will insist on the direction of "sharing human intelligence through voice" in the future. The direction of this mission will never change, but the means through which we realize the mission will continue to evolve. We will adjust our strategy and tactics periodically on the basis of the speed of evolution of technology and innovation in different areas. ⊠

Omics for All Is in the DNA of Beijing Genomics Institution (BGI)

have been fascinated by BGI for a long time. It is not only because Mr. Jian Wang, the founder of BGI, had worked in the School of Medicine, University of Washington, where I spent 20 years of my career, but also because the company had a unique vision when it started : it is a company that integrates genetic research, technology, application, and testing and treatment into one enterprise. The research findings discovered in the labs of BGI are frequently published in top scientific journals such as *Nature and Science*. More than 20 doctoral students and masters students graduate from BGI each year, making remarkable contributions to the progress of genetic science in the world. In the field of application, BGI has completed more than four million non-invasive prenatal testing (NIPT) and more than two million genetic testing for deafness, taking the lead in the world. With great curiosity and respect, Dr. Lu from Education University of Hong Kong and I visited BGI in Shenzhen and had a two-hour long talk with Dr. Ye Yin, CEO of BGI.





Xiao-Ping Chen Professor of University of Washington, USA

Jiafang Lu Professor of Education University of Hongkong

Ye Yin

CEO of BGI



Xiao-Ping Chen: Hello, Ye Yin, it is great to meet you in person! I watched the TV interview program Buddha and saw your dialogue with the host Dong Liang online. I also watched some of your speech videos, and read many interview reports about you and BGI. I'm very impressed by your great accomplishment. You are, the first and foremost, a scientist (biologist). You have published many papers on top scientific journals such as Nature and Science. Since you joined BGI in 2002, you had promotion almost every year until you became CEO of the company in 2015. At the same time, you participated in many science educational programs such as Interview with Ye Yin and a variety of public welfare activities. You're

Today our interview focus will be on your role as a CEO. My first question is, as the CEO of BGI, what is your management philosophy? How was such philosophy formed? I understand that these are big questions, so please take your time to answer them.

truly amazing.

Ye Yin: Let me start with a broader evolutionary perspective. Everyone in the field of life science understands that human beings are the sixth creatures that appeared on the planet. Previous creatures on earth experienced five mass extinctions. The dominant species, for example, dinosaurs, did nothing wrong before their mass extinction, but everything was over only because an asteroid hit the earth. The extinction was caused by a low chance event, which was external and completely unpredictable. Looking from this perspective, it does not make much sense to discuss the reproductive strategies of Tyrannosaurus Rex or Triceratops. My point is, whoever wants to seek his or her meaning in this world must develop a sense of the time in which he or she lives first. This sense of time will determine where and how you will spend your time to achieve a relatively higher return. The return may be your satisfaction or something else to pass on to the next generation.

At the beginning of the 21st century, the development of all scientific disciplines went through a sequence from scientific discovery to technological invention and to industrial innovation. This sequence becomes increasingly clear after the industrial revolution. Taking China as an example, over the past four decades since the reform and opening-up, most entrepreneurial activities have occurred following the path first from industry to industry, or from industry, then from reproduction to industry. In the recent two decades, the second phenomenon emerged, that is, from technical invention to industrial

innovation. By far, however, few entrepreneurial activities have involved scientific discovery. R&D cannot be considered as science. Discovery makes science. Therefore, the industrial innovation process starting from scientific discovery differs greatly from that starting from technological invention. Nowadays, many people mix them together and call them science and technology, yet science is not technology, and innovation is not entrepreneurship.

It is nearly impossible for the findings in life science to directly transform into technological invention or industrial innovation because we are dealing with human beings. We must do science and start with science to make sure we understand the mechanisms underlying a phenomenon. For example, if we only prove that a drug cures a disease but can't explain why the drug has such effects, it won't be useful to the public. Only when each drug and its mechanism be verified can it be allowed for clinical use. The drug then goes through a manufacturing process and becomes a public health product that benefits all and is finally accepted by everyone. Therefore, the field of life science is different from all other fields. All the enterprises we consider successful today show a similar pattern: they improve speed, reduce cost, change platform from offline to online, from real to digital, from separated logistic networks to connected logistic

networks. All these transitions are not too difficult to understand, but demonstrating that the findings in life science is very difficult.

Xiao-Ping Chen: Does it mean that your management philosophy originates from very fundamental issues?

Ye Yin: Yes. From this point of view, we need to answer several fundamental questions. First, is the 21st century a century of life science? In the last century, Einstein proposed the theory of relativity. The four articles published by him in 1905 were enough to prove that physics, the science of dealing the interaction between atoms and between protons and neutrons, can justify the power of creation. Although we cannot detect the exact interaction on macroscopic object but it did explain the power of creation. It predicts the power that creates the universe and everything. When scientists found that they could release the power, they later made atomic bombs and nuclear power plants. Then came the quantum mechanics. We started to know that scientists such as Schrodinger and Bohr created a new world from a new angle, that is, the macro world we had previously known and predicted became less predictable from a micro perspective, or almost unpredictable given today's measurement technology.

over the last century, the production from the aerospace technology to our mobile phones, all depended on the principles of physics. It is a leap from classical physics to quantum physics. Manufacturing and even atomic manufacturing drove us to pursue the limits of physical sciences. However, life science is different. Why? in the 1940s, many physicists agreed that the essence of life was chemistry, the essence of chemistry was physics, and physics could be described mathematically. Following this logic, life can be calculated using mathematics. At that time, many people asked "What is life?" They tried to address the question of life in a physical way, but later found that they could not even judge the nature of water by way of hydrogen and oxygen. Hydrogen and oxygen can be combined to form water, with great variance in the nature. Some people called this phenomenon "emergence", which is close to terms describing complex nature, for example, entropy and robustness. Life science is similar. Carbon, hydrogen and oxygen can be combined to form ATCG. Given the specific forms of combination of ATCG, other elements such as nitrogen, phosphorus and sulfur also come to form life. The variations in quantity and pattern lead to different forms of life. For example, are we necessarily the same as Escherichia coli? According to the reductionism, life of course conforms to the laws of physics, yet it cannot be fully predicted by the laws of physical from living system theory. It may conform to a more advanced logic of life, which deals with high-level language and thinking.

From this perspective, we can see that,

Since then, people realize that life science can become an independent discipline and should not be embedded within physics or chemistry. Then the double helix structure of DNA was discovered in 1953. After 1970, the technique to sequence genes was invented; and a commercial sequencer was produced in 1986. The first genome sequenced was a very small bacteriophage. This is a process of scientific discovery and technological invention. To date, we have reduced the cost of genome sequencing from the original USD 3.8 billion to around 2000 RMB. After such a long process, an early stage of its industrial development finally arrived.

A Life Hit the Biggest Lucky, in His Way of Life Midway, Namely in the Prime of Life in He Found His Mission

Xiao-Ping Chen: Thank you for providing such a large framework and background to pave the way for your management philosophy. What are your management philosophy and philosophical thoughts?

Ye Yin: My management philosophy is also what Zweig said in Decisive Moments in History: "A life hit the biggest lucky, in his way of life midway, namely in the prime of life in he found his mission." I feel that I found my mission through my work in genetic science arena.

BGI refined it into one sentence as our motto,



"Omics for all". Literally, gene is the basic element of life; science means discovery; technology provides platforms; and creating benefits is a mission, so our motto points out the direction, and enables us to work towards it; all humanity is our consideration, we work for all human beings, not just Chinese people. We explore an integrated way of meeting health needs, and fundamentally understanding who we are, where we come from, and where we go.

Xiao-Ping Chen: Very good. So when you state your motto "Omics for all", you would explain to employees what it means, its fundamental origin, against the backdrop of human development, so that they understand it and see it as their own mission and value.

Ye Yin: Yes. I tell our staff that there is no better time than now. They are all in the prime

time of their life, an age to do good for humanity and benefit others. Creating benefits is a longterm task. It means that in many things we do, we need to break today's so-called business rules, and not to abide by the short-term market interests, or conventional growth curves. What we consider is how to popularize our services, and, thinking backward, what preparations we need to put in place. The world has a population of 8 billion, with about 90 million people born and about 70 million deaths every year. In the process of continuous population growth, I think how we can make everyone grasp the pulse of the times is the most important thing we should do. This is important. In a commercial society, most people are obsessed with material issues. When we encounter specific problems, we may feel confused and cannot see clearly, we may forget why we are here and what our original aspirations are.



Xiao-Ping Chen: Have you ever encountered any challenges in maintaining your vision and mission?

Ye Yin: Yes, we met many challenges, for example, there was a period of time that many employees left BGI.

Xiao-Ping Chen: Why did they leave?

Ye Yin: There were many reasons. One was that they might have a different management philosophy; another was that they thought the compensation did not match their capabilities; yet another was that they believed they could accomplish more if they worked independently.

Xiao-Ping Chen: So which one you thought was a dominant reason?

Ye Yin: My observation is that although they left BGI, most of them internalized BGI's mission and wanted to achieve more. In that sense, they actually became an ally of BGI or a part of the ecosystem. While the turnover of every employee somehow shocked the organization, it also brought forth new possibilities. Instead of treating them as competitors, we support them and unite them so we become a big fleet and march together in harmony. I think this may be the greatest contribution BGI made to this industry, that is, cultivating a large group of entrepreneurs in this field.

Xiao-Ping Chen: Very good. You just talked about how science, technology, and industry are different but interrelated. In fact, BGI evolved into a business organization from a scientific research institution. From

organizational management perspective, how did BGI complete this transformation? What was the greatest challenge during the process? What actions did you take to make it happen?

Ye Yin: To me, the greatest difference is that in science there is right or wrong, but in business, there is not. As long as certain conditions are met, scientific results can certainly be replicated. In contrast, there is no such thing as right or wrong in business. It is not black or white, it is gray. Doing business is dealing with the society and requires more emotional intelligence, whereas doing science needs more intellectual intelligence.

In the process of BGI going public, we went through several phases. We were a scientific institution at the beginning, being right was very important to us. Later, we started to provide medical services to medical practitioners, whose clients were the general public, that's when problems arose. It was like that you were speaking English but all they heard was Chinese pinyin. How to convert English into Chinese pinyin challenges our ability to commercialize our service. Commercialization is related to cost. The ultimate factor that determines technology popularization is cost. If the cost is low enough, the technology can certainly be popularized. However, the pace and rate of popularization are affected by the conversion speed. In our case, using gene sequencing technique to detect disease in advance is very new; there are no wellestablished policies and regulations; there is a

lack of education in the general public, objection from those who have vested interests, as well as issues related to finance and management. Thus, what we did was learning by doing as we were the pioneers in this uncharted territory.

Omics for All

Xiao-Ping Chen: Which part of your business is serving scientists?

Ye Yin: We still conduct scientific research and publish papers in Nature and Science every year. We also provide data and experimental services to scientists outside BGI. We discuss with scientists the potential application of findings and discoveries in areas of environmental protection, manufacturing, and medicine. We have price advantage in gene sequencing in the world because we own the core technology and equipment. Our philosophy is to benefit all people by making this service accessible and affordable to everyone. In Shenzhen, our goal is almost achieved with the support of the government. The Non-Invasive Prenatal Testing (NIPT) is covered in the basic medical insurance package, which made is essentially free for eligible Shenzhen residents. It costs about 800 RMB for non-Shenzhen residents, but in Hong Kong, the charge is 7,000 HKD for the same test.

Xiao-Ping Chen: Will you lose money?

Ye Yin: Not really, because we have mastered

the core technologies. Our main consideration is how much contribution we want to make to the overall health of the society. For example, NIPT costs about 2,400 RMB in Shanghai because the government does not subsidize it. About 30% of pregnant women in Shanghai received NIPT last year, but in Shenzhen this number is near 100%.

As you can see, Shenzhen's strategy can be called 'concentrating resources to accomplish large undertakings', and that benefits everyone. Although the interests of a small number of practitioners are sacrificed, this is a manifestation of altruism and is the most beautiful thing about humanity. Human beings are different from other creatures in that they have authentic altruism while other creatures do not.

Xiao-Ping Chen: What does NIPT test?

Ye Yin: NIPT is mainly used to screen some chromosomal diseases such as Down's syndrome (also known as trisomy 21 syndrome). Down's infants usually have unique facial features, mental retardation and other malformations such as congenital heart disease. The prevalence rate of Down's infants is about 1/600 to 1/800, which brings heavy economic burden to the families and the society. Traditional Down's serological screening has a high omission rate or false positive rate, which adds to the burden of prenatal diagnosis for clinical practitioners. By taking only 5 ml of maternal venous blood, the NIPT technology can accurately determine whether fetuses have Down's syndrome through analyzing cell-free fetal DNA using the high-throughput sequencing technology and bioinformatics analyses. It has a lower omission rate and a lower false positive rate, thus greatly reducing the burden on prenatal diagnosis and effectively relieving a clinical pain point. The NIPT technology can discover trisomy 21 syndrome and can be used to test the abnormal number of chromosomes and even abnormal structures. At present, this testing costs around USD 1,000 in the USA and Japan. In China, the national average cost does not exceed USD 300.

Xiao-Ping Chen: This is amazing. The vision of BGI, namely benefiting all humanity with gene science and technology, is quite noble. How do you create a corporate culture to achieve this vision? What are the core values of BGI? How are the values reflected in your actual operation?

Ye Yin: What I said earlier is highly related to this. As you know, the founder of BGI, Dr. Jian Wang and his fellow colleagues returned to China from the U.S. in early 1990s. At the time, what they wanted to do most was to participate in the Human Genome Project (HGP) on behalf of China. Therefore, the initial purpose of BGI was not to make money. After returning to China, they set up a private organization with the attempt of participating in the HGP. This may sound crazy to some people, but they were truly indoctrinated by the idea that gene science should be "jointly owned, collectively executed, and publicly shared", promoted by HGP. It seems like a simple task to set up a company with that purpose, but

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if nobody did it at that time, another commercial company would take control. If that company patented all genes, everybody would have to pay a high price for any gene testing. This is a critical issue because sharing would be impossible if that was the case. The vision of the BGI founders to ensure that Chinese researchers will have a place in the field of genetic research, with the ultimate goal of using gene science and technology to benefit all humanity. History has it that the first person who received genome sequencing was a white person who was a mixture of Caucasians. The interesting thing that all human beings have the same genome, regardless of the race or ethnicity. In other words, race or ethnicity is only a demographical concept rather than a genetic concept.

Xiao-Ping Chen: So the original intention was to participate in HGP, not to make money. This core belief is, of course, clear to and shared by founders, but how do they pass it on to other people in the organization to ensure all employees are on the same page?

Ye Yin: Perhaps not all employees have the same understanding of our purpose, but the key is, when the core values of a company are clear at the beginning, people who choose to join the company are those who share these values, even though they may appear to be 'different' in the eyes of others. I was one of these people.

Xiao-Ping Chen: How do you identify such candidates in recruiting?



Xiao-Ping Chen: I agree. Making contributions to humanity is an inspiring purpose.

Ye Yin: Absolutely. Those who have not become "exquisite egoists" would want to join BGI. We attract a large group of people who want to change the world. They highly identity with "Omics for all".

Xiao-Ping Chen: What happens after they join BGI?

Ye Yin: After recruiting those who are willing to go the extra mile, we teach, coach, and mentor them in various ways. Basically, all new employees are assigned to senior staff to be





mentored.

In the company, all of our discussions of business are carried out from the angle of public health. We seldom calculate the profit of a product. Instead, we discuss how many people will benefit from the product at a certain price. If a product is provided in one province, what will be result? If a product is provided nationwide, what will be result? This orientation gets to frontline employees by asking them about which diseases are tested, the prevalence rates, the successful detection rates, and how much family and social burden can be reduced after a disease is detected. After these questions are answered, all of us can see the big picture. Then we conduct a reverse calculation. For example, if the price for NIPT in Shanghai is 1,800 RMB, the input and output is perfect even. I then ask them what if the price is reduced to 900 RMB or 600 RMB, when would the cost-effectiveness ratio of health economics would become 1:3 or 1:4. It means we can save 4 RMB if we invest 1 RMB. We identify the price through this analysis. We then ask the technology department whether this price is feasible. If the department tells us that the price is not feasible, we will go back to ask why. Later, we identified that the problem lies in the throughput. If the throughput can be improved to 10 million, will the price be feasible? If the price is feasible, the task becomes simple. We only need to find a model supporting 10 million throughput to realize the economic model. Therefore, I do not induce the future market based on the cost today, instead, I reversely induce the cost today based on the figures projected by the future market. The reverse induction of the cost method actually challenges our technologies, and forces us to strengthen R&D and improve efficiency.

Xiao-Ping Chen: So, you ask the government to provide support?

Ye Yin: No, when I talk about this to government officials, I tell them that we are helping the government to solve public health issues.

Xiao-Ping Chen: Very smart. Can you tell when your staff's values deviate from the preset culture of BGI?

Ye Yin: At BGI, we call each other co-walkers, that is, we walk together to reach a common destiny. We share long-term interests, which may be stock share or stock options. Only those who share the same values can be co-walkers. In fact, our founder Mr. WANG had distaste for two words: one is "enterprise (qi ye)", which in Chinese literally means attempted business, and the other is "partnership (he huo)". These words come from the West but their Chinese translations are not accurate.

Mr. WANG thought carefully about what words to use. He never calls BGI an enterprise or a company. Instead, he calls it an organization. We call ourselves BGI or BGI Group. If a "cowalker" does not want to walk with us, they are, of course, allowed to make a living by providing professional services. This is because the essence of life science is that exception is always there. Life science must allow exceptions. If you

stress diversity, you must allow the existence of all kinds of people. With this said, the core group of co-walkers who are carefully selected must share the same value and mission.

Founder WANG's Instrumental Determinism

Xiao-Ping Chen: You mentioned that Dr. Jian WANG, the founder of BGI, is a visionary and may be one of the few visionary persons in this century. What are qualities and characteristics in Mr. WANG have become the genes of BGI? How were his personal qualities converted to the genes of BGI? As CEO, in daily management and operations, how do you view and deal with your relationship with Mr. WANG?

Ye Yin: Mr. WANG was born in a family of revolutionaries. His parents were government carders. His mother once served as a county's Party Committee Secretary and participated in the suppression of bandits. She was a tough woman. When WANG started junior high school, China was sending young people to rural areas, which was followed by the Cultural Revolution. His parents were imprisoned. In his childhood, he never lived in poverty. On the contrary, his family was relatively wealthy. This is why he is quite generous and never cares about money so much. Only when he was sent to work in a rural area in his youth, he started to taste hardship, and knew what it really meant. He experienced starvation

so he wanted to work in agriculture. He also saw many handicapped children, but he did not know why their appearance was so dumb. Later, he learned that they were mentally retarded but did not know it was due to genetic defects. These images deeply concerned him and made him think about how to solve this problem one day. Back then, he also had to walk tens of kilometers in a day to exchange some stuff or buy some salt for the village people. Without any proper shoes, he used grass and a broken tire to make shoes for himself. As he excised so much when he was young, running back and forth, he can walk on a gravel road with bare feet today. This was why he is physically tough today; he climbed Mount Everest at the age of 56.

In late 1970s when the College Entrance Examination was resumed, WANG got admitted to Hunan Medical College. He was a very smart and hardworking student, and published many papers on core Chinese medical journals. In medical school, he encountered an electronic microscope machine for the first time, with which he could see viruses. As the electronic microscope was put in an airconditioned room, and it was very hot and humid in Hunan, WANG decided to stay in the air-conditioned room with it every evening. The microscope was used by others in the daytime, and he could use it to conduct experiments at night. This meant that he mastered the most advanced medical instrument during those years in China. The medical equipment was the core tool of scientific research. WANG came to realize that whoever had an electronic microscope would be able



to conduct most cutting-edge research and become a front runner in new medical discovery. He kept using the electronic microscope to make new discoveries and published many papers. He later called it tool determinism.

In addition, Mr. Wang really stresses continuous learning, self-critique, and selfreflection. He remained active in scientific research. The last article he authored was about degeneration of vascular plaques, in which he found that the plaques in the blocked blood vessels can shrink in a benign way through exercise and diet. He is truly a remarkable person.

Xiao-Ping Chen: I heard that he also has a vision for the human genome, for instance, people in the future can live a life of 100 years or longer. How did he generate this idea?

Ye Yin: He had lived and worked in Beijing for a while, with a job focusing on preserving human remains. Later, the job was gone so he decided to go abroad. He went to many places in the U.S. and finally went to University of Washington in Seattle.

Xiao-Ping Chen: This is the university where I am teaching now.

Ye Yin: Yes, indeed. It just happened that the famous Genome Science Laboratory was next door to his office. Several Chinese students with CAS Biology background worked there. They were top Chinese students in biology funded by Ray Woo. These students included Guyang HUANG and Jun YU, who later also became founders of BGI. They had nothing in their rooms but gene sequencers. When WANG saw that, he

immediately realized that the sequencers were the tools that determined the winners in this field.

Xiao-Ping Chen: So the School of Medicine at University of Washington was a leader in the field for researching human genome sequencing in the world?

Ye Yin: Yes, they are very strong and later become the center of genome research in the world. WANG wanted to move the project back to China because he thought, as a Chinese, he needed to do something for the nation. Then all of the Chinese students made a collective decision of returning to China. In 1997, they held a meeting in Zhangjiajie, where they agreed that at the age of 40, they lived a good life and obtained academic achievements, it was time to pursue individual aspirations. They wanted to pursue something meaningful, and the human genome project seemed to be the one. Such vision and strategies remain unchanged since they were formulated 20 years ago.

This means that Mr. Wang had a vision about the future. Later I asked him, did you ever expect what we could achieve today? He said that while he had a rough picture about this, but he never expected it could be this big and this fast. This vision is so important. If someone in the world envisioned a path for you, you would not be afraid of others. The first person who envisioned the path faced the most difficult situation and it took tremendous courage to be persistent. WANG is such a typical tough and persistent person from Hunan Province. He's not afraid of any challenges and can insist on his work.

Xiao-Ping Chen: When did you first meet him?

Ye Yin: I met him in 2002 when I joined BGI.

Xiao-Ping Chen: After you became the CEO, how do you work with him?

Ye Yin: Generally speaking, a person who can see the future is lonely. I think my contribution to WANG is to effectively translate his vision and strategies into operational tactics. For example, tool determinism. When WANG talks about this, I would find evidence from the history to prove what are determined by tools in science. Without tools or the large telescope in the early years, how could Galileo observe the moving tracks of planets and how could Kepler propose the three laws of planets? Without the microscope, how could we know the existence of bacterial viruses? These discoveries were all determined by tools.

Xiao-Ping Chen: What are your core tools now?

Ye Yin: The gene sequencers. BGI produces the sequencers independently. So theoretically speaking, we can produce as many sequencers as we want. This gives us a comparative advantage. For example, if you can produce airplanes and I can also produce airplanes, this is called comparative advantage, whereas if you can produce airplanes and I can only produce socks, I would need to sacrifice 10 times of profits to exchange with you. This is called comparative disadvantage. If his cost is lower than mine, he could beat me. The last issue of comparative advantage is the cost. Without a lower cost, we would have been strangled. In 2012, Illumina tried to "strangle" us...

Xiao-Ping Chen: How did you get through the adversity?

Ye Yin: At that time, the top three sequencer providers in the U.S. were Illumina, Life, and CG. We used to rely on the platform of Illumina (No. 1 market share) and soon became the largest sequencing center in the world. As the sequencing platform provides sufficient throughput and a strong biological information analysis capability, we sequenced almost all types of objects that can be tested. Illumina realized that we grew too fast, which endangered its own leading position, so it started to increase the price of the machines, regents and maintenance services. They stopped giving us authorization to use medical equipment. At that moment, CG (No. 3 market share) was in a very bad situation and approached us to purchase their company. That's how we bought CG. Looking back, we were forced to be the one we are today.

Staff Professional Growth in BGI: A Zigzag Path

Xiao-Ping Chen: BGI is now a large company with more than 7,000 employees around the

world. How do you view the contribution made by employees? In terms of organizational structure, do you adopt a matrix structure or self-management teams? How do you set up your incentive mechanism?

Ye Yin: BGI has close to 7,000 employees. Our management system is a bit unconventional. Many organizations like the matrix structure because it has clear chains of command and functional departments. And the main reason for the adoption of a matrix structure is because most companies have only one objective, that is, making a profit. BGI is different in that it involves both for-profit and non-profit projects. In addition to the non-profit Research Institute and BGI Gene College, we have an academic journal and undertake the operation of China National Gene Bank located in Shenzhen. These projects cannot be simply assessed using economic indicators.

Xiao-Ping Chen: Is the research function funded by BGI or by the government?

Ye Yin: Some research, for example, basic research, is funded by the government, but BGI funds most of its research, with profits from the commercialization piece and even by selling its stock shares.

As BGI has both for-profit and non-profit project, we do not apply the same standards to evaluate different units, and even with the same units, the standards change over time. For example, at first, we evaluated the research

institute using the number of papers published in a year, and the papers' impact such as the number of citations. Then we realized that the citation was not very useful, so we evaluated the paper's potential for application. For technical staff, we evaluate them using indices like the number of patents, the number of students placed, and the quality of graduate students. With regards to business departments, we mainly focus on their products, and other standard criteria used in the industry. All financial indicators shall be taken into consideration. To help each unit to achieve its goals, we deliver intensive and frequent training to our staff in every department. We are able to screen out the unqualified employees this way. In addition to training, we also test them. For instance, all staff, regardless of their majors, must take a course in biology and pass the exam for senior high school graduates. This is a prerequisite so that everyone has the adequate knowledge to understand what we do. In addition, we invite experts or experienced employees to provide other types of training in the mid-year and end of the year meetings. Upon the completion of every training, examinations will follow immediately.

For instance, we require our employees to learn how to do experiments, such as "taking blood" in the laboratory. Of course, we use simulated dummies. Even staff in the HR Department and Finance Department need do the experiments. Otherwise, they have no sense of how sequencers work and how businesses are carried out on site. We also assign staff to present to pre-designed scenarios in the exhibition hall. During their presentation, we will have judges listening to their presentation to 'sniff', whether the presentation contains the spirit of the BGI culture; otherwise, the staff would not be promoted.

Xiao-Ping Chen: I didn't know that BGI uses the 'sniff' method too. I know that Alibaba has designated staff to sniff people. How do you select them?

Ye Yin: They are primarily the senior leaders of BGI. They attend the presentation and try to detect if the presenters are full of pride when they are speaking. If the presenter has no feelings during the presentation, there is a problem. The BGIers have a strong sense of pride in their heart. Of course, we hope them to be proud and modest as well.

Xiao-Ping Chen: How do you design the incentive mechanism to induce pride?

Ye Yin: The unique thing about promoting staff at BGI is that we provide a zigzag path for them to grow, not only professionally, but also personal growth. When a staff stays at the headquarters for a while, he or she will have an illusion that the communication of the company is very efficient. However, we have business in 102 countries and have set up offices in more than 20 countries. Due to time difference, language difference, etc., miscommunication happens all the time. To deal with this problem, we developed a policy, that is, employees above a certain level must undertake

a half-year overseas assignment. After they return, they need to report their work experience there and analyze local customs and practices. They need to communicate clearly about what they should do and where new opportunities are. This is also why we keep sending many employees working at the headquarters to frontline offices.

Jiafang Lu: How did you come up with these ideas?

Ye Yin: We have been thinking about the issue of centralization and decentralization for a long time. To a great extent, this issue involves the balance of manpower, material resources, and financial resources. When BGI first moved to Shenzhen from Beijing in 2007, we met a lot of challenges because you left a familiar environment and entered a new space. As you can imagine, most people felt that they were forced to move from Beijing to Shenzhen. Similarly, many expatriates were forced to leave their home country, including those working at Huawei. Everyone was crying and complaining, feeling horrible. They knew nothing about the new location but were forced to move there. Then we realized we have not forced enough, not only senior executives should be forced, other managers should also have such experience.

Xiao-Ping Chen: Interesting. Today most globalized companies today require their managers to have expatriate experience before they can be considered for promotion. This is also an important step of developing global leaders and cultivating corporate successors.

Self-Discipline, Self-Driven and Self-Esteem

Xiao-Ping Chen: My next question is, as a large biological high-tech company, you need to constantly innovate, and meanwhile, you need to ensure execution and efficiency. How do you balance the two? It seems to me that you prioritize innovation over execution.

Ye Yin: Not really. At the execution level, we focus on "three good": good health, good learning and good work. Good health derives from self-discipline, good learning must be selfdriven and good work is the result that brings self-esteem. Everyone wishes to have good health. To have good health, one must be selfdisciplined: eat less, exercise more. Learning is the same. You need to have the intrinsic motivation to learn. Lastly, good work itself boosts self-esteem. I often tell my team members that it is a crime to work hard without any results because you have wasted opportunities, spent travel expenses, and received salaries from BGI but gained nothing. For us, any innovation and breakthrough should be linked to the execution standards and efficiency. If you do better in innovation and breakthrough, your standards and efficiency will be improved and you will gain an advantage and produce resources, which

in turn facilitates innovation and breakthrough. Why? For example, if you published many papers on Nature and Science, more people will come to cooperate with you because the papers you published were cutting-edge. This becomes a competitive advantage. With the same input, if you cooperate with BGI, you may solve an important scientific problem; if you cooperate with another organization, nothing may mature with the same time and effort. In this sense, the same paper looks very different in the eyes of a PhD holder vs. in the eyes of a primary school student. In this process, we need to continuously balance innovation and breakthrough, and improve standards and efficiency. They are not contradictory to each other. Especially for life science, we need innovation and breakthrough, but we also need standards and efficiency when developing technologies. We are developing various standards and we must have the voice in standards.

Xiao-Ping Chen: What kind of standards are you developing?

Ye Yin: Like the basic sequencing standards, such as what can be called as a standard DNA sequence, sample storage standard, and various standards at the application level. Standards and patents are like our two legs, we can walk properly with both legs. Standards emphasize the open and publicly accepted attributes, whereas patents emphasize the private attributes. If you develop only one standard, you have no voice in the industry. Now we move fast on developing

collective standards. I also serve as the president of Shenzhen Association of Standardization. Why wouldn't we set up the standards before others joining the race, rather than waiting till everybody is in the race?

Xiao-Ping Chen: This is fore-sighted.

Ye Yin: Yes, it is because there are no unified standards at the moment; it is a blank area, that is why we need to establish standards now rather than later.

Xiao-Ping Chen: Do you mean that no global standards are available for sequencing and synthesis?

Ye Yin: Correct, no. We need go step by step, developing enterprise standards, collective standards, industry standards, and national standards. Now, national standards are fading out. Everybody feel national standards are a silly concept, indicating only threshold standards. Product sold on the market must go beyond national standards.

When Facing Media Crisis, We Respond by Going All the Way to Embrace Humanity

Xiao-Ping Chen: Very good. My next question is about crisis management. I heard that BGI faced a series of crises after its IPO. For example, in the omission in NIPT case,

BGI was questioned about defrauding stateowned properties; recently on WeChat BGI was reported to lay off staff. How do deal with these crises?

Ye Yin: After going through these crises, I have formed my own view. First of all, if you are not a star company, nobody will pay attention to you. Let me elaborate by recounting the crisis incidents.

For instance, the omission case in NIPT. The truth is that omission actually did not occur. Why did the media report like such? It was because of the lack of knowledge on the reporter side. In the testing range we provide, for example, if you are in the outer space and throw a stone to China, we can detect which province the stone will fall into. In this case, our detection result indicates the stone will fall into Hunan Province. The result is correct. However, we are asked to tell which city the stone will fall into: Changsha or Xiangtan, this is beyond the scope of our test as the price the users pay does not match their precision expectation. This is the first point I want to make. If we consider this incident from the perspective of ethics or common sense, the pregnant woman in Changsha was told to receive prenatal diagnosis twice but she did not do so. Later, she sued the hospital for half a year. Then she found someone to attack the hospital on social media. This is the whole incident. Someone asked me why we did not fight back. I told him that we did not want to hurt her again because she was unfortunate enough and suffered from the disease of her child. With this said, in the professional field, no doctor or expert questioned our testing results. We all understand there is no perfect technology. The key lies in whether the current technology is better than the previous one. Therefore, for any emerging technology, the leading enterprise must be "misunderstood" once, but truth always becomes clearer afterwards, and then the whole industry can develop immunity. Genetic testing is not 100% precise or almighty, and it is just useful. This is what the leading enterprise must suffer. However, we became stronger after enduring the attacks.

As for the event that BGI was suspected of defrauding state-owned property, I think if this had really happened, we would have been put in jail already. The lies could be really absurd and nasty. The social media lost the lawsuit last week and was required to apologize to BGI. In fact, we could not be happy because the accuser only spent 100 RMB on social media, but our stock price dropped by at least 10 billion RMB. I think what the person did was really horrible. He could accuse us freely on social media without providing any evidence. When I first heard about it, I was furious and wrote an article full of anger. When the Southern Weekly approached me, I told the newspaper that we must speak out because they were shaking the foundation of the industry. If you believe taking a genetic testing means you can obtain all information, the industry will disappear. This means that the most promising industry in China will be destroyed. It seems that this group of people is guite ignorant about science and technology. On the other hand, we also need to reflect on ourselves: can



we do better in public relations when dealing with crises? Do we need to put more contingency mechanisms in place? Should we have better coordination next time? I admit there is necessity to develop crisis-responding systems. After one company is attacked, everyone in the industry should develop a reasonable level of robustness (systematic health), which can make the company stronger. Now many people tend to believe there is no problem with BGI because it is still fine after it have been questioned so many times.

There is also a cognition process any industry development must go through. In 1978, Dr. Robert Edwards successfully created the first test tube baby. In London, some people called him a devil. Did we have children like this before? By 2010, 4 million test tube babies were born because of the technology, and he won the Nobel Prize. Everyone looks like a fool in the face of history. If we look back at what we talk about today a hundred years from now, we may find we are all fools.

Xiao-Ping Chen: Although it was a passive reaction, BGI became more immune after going through these crises. In fact, BGI has done a lot of services for the general public, including your Interview with Ye Yin podcast series and many of your public speeches. These are active means to disseminate knowledge.

Ye Yin: Yes, the work related to the public good was still ongoing during the crisis period and I never missed a single episode of Interview with YIN Ye. You have your work and I have mine. I only do what I should do in spite of any stressful events.

Xiao-Ping Chen: Your focus and concentration

are incredible. In the past 10 years of being CEO, you must have encountered situations where your personal feelings and business rationality are in conflict. Can you specifically describe one or two incidents?

Ye Yin: In 2003 when SARS broke out in China, we risked our life to develop a reagent. We spent 72 hours going out to collect virus samples and then developing a diagnostic reagent, while this may take years for an ordinary company to complete.

After we developed the reagent, we started to discuss the price of the reagent. When we did the work, we were not thinking about how much it could charge. However, when we got the license for the reagent, we were excited. The price we were discussing ranged from 100 RMB to 10,000 RMB. Then WANG suddenly pounded the desk and said, "we can't make money by taking advantage of a national disaster. No one is allowed to sell the reagent. Instead, we will donate it to the country!" Everybody was stunned at his words because what he said greatly shocked everybody. If we were selling the reagent, we could easily earn hundreds of millions of RMB, while the annual income of BGI was only slightly above 20 million RMB at the time. We were all silent and felt that the time passed so slowly. We also wondered in our head why he had such an idea. Later, we understood that the biggest dilemma we faced was between a large sum of money and a lifetime honor. We finally understood that he made the right call and we followed the right leader.

Ringing the IPO Bell

Xiao-Ping Chen: This incident was rather dramatic. BGI has since contributed a lot to the public welfare these years. I noticed that in the bell-ring ceremony of IPO, the representatives were mainly your clients rather than the top management team. As a public listed company, how are you accountable to shareholders and how do you balance the relationship between profit making and philanthropy?

Ye Yin: I think what WANG often says can better answer this question: shareholders are our staff. In fact, to some extent, everyone is a staff. We also tell investors that they are our staff as well. We hope they also share our organizational culture. What is the purpose of IPO? To make a fortune or to seek recognition might be something we all want to have. The last paragraph in the Game of Thrones discusses what can unify the world. Is it money? Is it army? No, it's stories. Only stories can be widely spread among people. We hope we are a story, and when the bell rings, it is not just about BGI being listed in Shenzhen Stock Exchange, but also about ringing a funeral bell for all diseases. We have mastered the key for controlling and preventing genetic diseases. With genetic testing available to everyone, now we can prevent the diseases that cannot be cured, or the genetic diseases people cannot afford to cure. This should be passed on as a story. Without stories, we cannot create awareness or form a shared understanding. Without resonance or

consensus, rare diseases are still rare diseases.

There are millions of patients with rare diseases in China. Do you know them? Can anyone name 10 rare diseases? If no one knows such information, we cannot arouse public attention. In fact, these patients are just common people except that they suffered from genetic diseases. We cannot discriminate against them. We should pay more attention to them. How can you wake up people if they never heard such stories? Many people think that the IPO of a company is to cash out on their shares. WANG announced on the day of IPO that he would not reduce his shares within at least five years and would donate money to one rare disease every year. At present, there are about 8,000 rare diseases in the world. About 80% of the diseases are genetic caused by gene defects. According to WHO, the overall prevalence rate of monogenic genetic diseases is 1%. Based on the current world population of 8 billion, there are more than 80 million people suffering from genetic diseases in the world.

Xiao-Ping Chen: It seems that much of your current business is related to sequencing and testing. Will your business cover treatment in the future?

Ye Yin: Yes, genetic testing is essentially used for preventive treatment of diseases. It is used for prediction, prevention and precaution. For instance, if you spend USD 300 on genetic testing for a neonate, which can go with the baby for a whole life, and all genetic diseases of the baby can be eliminated. To know what diseases your offspring might have, you can just do the calculation based on your genes and genes of your spouse. This will be a huge business model with a market covering the world population of 8 billion people. This is a huge number. In fact, most tumors and cancers are genetically determined. Tumors are genetic diseases. Immunotherapy and targeted therapies work through genes. We can explore and study everything through gene sequencing.

Ultimately this is tool determinism. If the prices of sequencing and synthesis are low enough, most of our diseases can be effectively prevented or intervened. We can gradually say goodbye to many rare diseases and genetic diseases. This is what we can see: per capita life expectancy of the whole human race is probably the last part of human life that is not digitized. It is like blood type testing 30 years ago; we expect that 30 years later, gene testing will be as cheap and convenient as blood test today.

Gene Is Human Destiny

Xiao-Ping Chen: As a leader at the forefront of genetic science, what do you think of the prospect of genetic diagnosis and treatment, and the challenges and opportunities for BGI? What impact do you think BGI will have on the landscape of the whole genetic science and its ecosystem?

Ye Yin: In my opinion, today the only thing that has not been digitized is the genes of a whole



person. One person has three gigabyte (GB) genes, which are genetic materials of each cell. The father has 3 GB genes and the mother has 3 GB genes. In fact, a cell has 6 GB genes. The 6 GB is magnificent. Its structure implies that it is mysterious.

Xiao-Ping Chen: Just like Yin and Yang in Chinese philosophy. It is a double-helix structure.

Ye Yin: Yes, it has a sense strand and an antisense strand. Usually, only the sense strand is expressed and can be understood as the positive strand, but the positive strand will be wrong without a negative strand, because the negative strand is necessary to correct errors that occur during copying. The two strands are intertwined and complement each other on a long-term basis.

Xiao-Ping Chen: It's magical.

Ye Yin: Yes, it's magical. Gene arrangement is a type of information. The universe entails matter and energy, and also information. Information is neither matter nor energy; yet matter and energy can interact through information. In my mind, matter is equivalent to energy. Matter is energy and energy is matter. Electric field, wave, and magnetic field are all energy. Do you think this table is solid? No. When an atom is opened, relative to the atom, the atomic nucleus and electron in the atom are like two ping-pong balls in a basket. In fact, the electron is very small and others are empty. We feel the table is solid because we cannot get our hands through it.

However, a neutrino can immediately penetrate it unlimitedly. The limit of our eyes makes us believe nothing exists when we cannot see it. This is a misunderstanding most people have about science. If we can make further breakthrough in tools, when everyone can conveniently see their DNA sequence arrangements and combinations, and when the information becomes big data that can be shared, the whole society will change.

Why did I say so? For example, if you have a Hermes bag that is composed of atoms, nothing leaves after you give it to another person. Therefore, in material economy, the transfer of atoms means loss of atoms and sharing of atoms means depreciation. In the information society, on the contrary, sharing does not imply losing, but accumulating value. For example, the more a photo is clicked on the Internet, the more valuable the photo is. Therefore, the information society is one step ahead of the material world. It values sharing. Things like shared economy, blockchain and bitcoin that emerge on this basis are more valuable when the scope of sharing grows. Life economy is particularly interesting. Each person's DNA is unique. My DNA cannot be yours unless we give birth to a child, but DNA itself is shared by human beings because the origin of human beings is the same. Thus, DNA is materially private but technologically public. In this sense, the more DNA is shared, the more valuable DNA is. Besides, the more one shares, the more valuable the private DNA of the person is. This is because when you give one point, you will get the probability of all information statistics. If we need find a materialized thing for the community

of human destiny, it must be gene. Genes are the community of human destiny. The genetic difference of people is within 1/1000. After every person is digitized, we can be computed and sequenced. Statistically, there is no significant difference when 100 million people, 1 billion people or 8 billion people are sequenced.

Jiafang Lu: What role do you think BGI will play in the ecosystem of the genetic science?

Ye Yin: Take NIPT as an example. Shenzhen was the first city that promoted NIPT among hospitals. In the future, NIPT can almost be fully covered in cities with a population of more than 10 million people.

Shenzhen has a population of more than 20 million people. It sounds normal in China, but for countries in Western Europe, this population equals to the combination of 4 Denmark and 60 Iceland. Last year, only 17 Down's infants were born in Shenzhen, among which 10 did not receive NIPT and 6 received NIPT but were informed of high risk. The NIPT result was incorrect for one infant due to technological limitation. The result was wrong because the genes of the placenta rarely differ from the genes of the fetus. We tested the placenta, which could not fully represent the fetus. As I said earlier, in life science, exception is always there. The economic value of this test is huge. For example, if there is one Down's infant among 60,000 infants, there would be more than 300 Down's infants in a population of 20 million people. 300 versus 17, it fully shows prevention outweighs treatment. This is just one disease, what if 8,000 diseases are prevented? What if tumors can be cured? What if genetic testing can make people live longer, improve the quality of life and health or make the physiological age infinitely approach the healthy age? How significant is the value of improving survival rate and life quality for each person? For example, a person died at the age of 80 but was still healthy at the age of 79.

This is what we can bring to the human race through genetic science and technology. What we think about is doing good for all. In the past, we carried out scientific research, bought imported equipment and reagents, made Chinese samples, uploaded data to the databases located in the USA, Japan and Europe, then published papers and became experts or professors. What BGI is doing now is completely different. We use our own reagents, instruments, databases and samples; we write our articles and publish them on our journals. The greatest contribution of WANG lies in this great blueprint. In the whole BGI system or for the whole human society, we could hardly find anything to match this. The closest benchmark we found was Bell Labs in the last century, which carried out science and application but later was split. BGI must create a beneficial ecosystem. This is what we foresee.

The Meaning of Life

Xiao-Ping Chen: Now, let me ask you a personal question. How do you do it all: corporate management, public welfare, family responsibility and self-refinement?

Ye Yin: Many people asked me this question. In my opinion, what you manage is your energy, not your time. Running is generally believed to improve health, yet few people realize that thinking makes a person smarter. If you believe that you can improve your muscle, your heart and lung, and your joint health by doing exercise, why don't you practice your hippocampus and amygdala through memorizing and practicing your emotions that control long and short memory to make you naturally produce dopamine and endorphin? What is satori? Persons with satori have mastered how to control their organs. They can instantly secrete a large amount of endogenous morphine substances, i.e., endorphin. Great masters have this ability. Satori requires a great deal of experience and practice. For instance, I went through a painful period of time. It was the time before I entered the top management team and I faced great challenges. I used to believe that I was very smart, but during that period of time. I was often criticized for conservative thinking. I did not agree with the criticism and started to think every day how I can become less conservative. I thought over and over for about two months and felt great pain.

After that, I found my whole thinking model changed and I started to view issues from a wider perspective. As an old saying goes: "he who does not seek the overall situation does not seek a field, and he who does not seek everything does not seek a moment". The change of thinking model was realized through thinking.

Xiao-Ping Chen: Did you meditate?

Ye Yin: It was not mediation, I just thought and mortified. In Buddhism, the similar practice is called pratyekabuddha, which means you have to straighten out your thinking by yourself. I may think for two to three hours every day and continuously deduce and rethink in my mind.

I thought about the origin of the universe, the origin of life, limits of matter and human cognition. I found these would converge at a certain point. In this process, I had a feeling of satori for myself and mastered what wisdom was.

Xiao-Ping Chen: What do you think is wisdom?

Ye Yin: When multiple disciplines intersect, everything becomes connected. When science and humanity come together, you feel joyful and transparent at that point. This is the so-called satori. Satori does not mean I find a way to fly up. Instead, it means that history, sciences and humanities integrate at this point, enlightening a more thorough understanding.

Xiao-Ping Chen: In your opinion, what is the meaning of life?

Ye Yin: The meaning of life varies with religions and countries. For me, the meaning of life is to "rebuild spiritual values for the society, determine the meaning of life for the people, inherit academic heritage of the saints in the past and open up the foundation of peace for the world". In this hierarchy, establishing virtue is at the top, spreading words in the middle, and making achievements is at the bottom. Most entrepreneurs can do well at the achievement level, that is, they make a fortune. I have not reached the stage of virtues, and whether I can spread words will depend on my persistence. This is why I kept doing the podcast Interview with Ye Yin. The general public do not know science, you can't blame them. What you can do is to bring them to the fields and help them change their mind. When I express an opinion, you may blame me or disagree with me, as long as you pay attention to what I've said, it is OK.

What a nation fears the most is when a group of elites claim they have mastered life science, but they view the general public as an ignorant crowd and do nothing good to them. They never think about how to make science popular and dare not stand up in the face of rumors. It is pitiful that they did not do anything. I choose to do some work on science popularization. I must insist on the work and be practical. I never emphasize whether I am right or wrong because what we said might be wrong anyway 30 years later and new discoveries will be found in the future. We used to subvert textbooks of life science every five years. If you give me enough time, I can explain the history to you, telling everyone how ignorant we are. We are just living in a period on the current historical scale, which is very very short. At this point, I admit that I am narrow and ignorant; it is exactly this point that arouses our resonance.

Xiao-Ping Chen and Jiafang Lu: Excellent. Thank you so much for your sharing!



A Winter Maneuver of Squirrels

An Interview with Liaoyuan Zhang, Founder & CEO of Three Squirrels

> Interviewers Yating Cheng & Yina Chu Fudan University

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"Papa Squirrel" Mr. Liaoyuan Zhang's office looks more like a lab of products than a regular office for CEO. On his bureau are laid rows of packaged nuts with impressive designs in red, yellow and blue. The bright colors accentuating the Chinese characters of "Three Squirrels", together with the logo prints of squirrels, are part of the luxury gift package Mr. Zhang has scheduled for the oncoming Chinese New Year. It's really hard to imagine that a CEO in charge of the company's overall strategy would care so much about the details of all these products, including the selection of designs, packaging, copywriting, etc.

Ever since its founding in 2012, Mr. Zhang has been enjoying a leading position in marketing and branding that brought the competitiveness of the Three Squirrels in the market. At the primitive stage of online snack food retailing, the Three Squirrels had won its predominance by virtue of excellent marketing, quick response to customers' demand, and lucrative e-commerce platform dividend. As the dividend percentage of e-commerce began to dwindle, the incremental market started to shift to a market of existing stock competed for by all parties, and the consumers' requirements became more varied. Mr. Liaoyuan Zhang, as the pacemaker of the Three Squirrels, was alerted that the market was encountering its bottleneck.

As early as in 2017, when the Three Squirrels' sales growth in the season of "Double 11 or Single's Day" suddenly dropped, Mr. Zhang realized that a crisis was coming. He said, "The problem has existed there for a long time, but people are prone to be deluded by growth. When stagnation comes, you feel that everything is wrong."

How to realize a necessary transformation for the company? Mr. Zhang chose to turn back to his most familiar role of marketing planner, while the Three Squirrels to the fundamentals of production and user experience. "Steve Jobs, the former CEO of Apple, had been actively involved in product designing throughout the process", Zhang said. Regarding Steve Jobs as his role model, Zhang hopes to maintain his own advantages, especially in the field of marketing.

The Post-dividend Period

MI: In 2017 "Double 11" season, the Three Squirrels' sales volume was not so ideal. However, in 2018, during the same period, your sales volume was increased by 40% year-on-year. What do you think are the main reasons for this increase?

Liaoyuan Zhang: In my opinion, as one of the numerous start-ups in China, our success is basically decided by our ability in finding a niche market or some dividend-bearing field. From 2012 to 2017, the Three Squirrels experienced a dividend period of online snacks retailing. Around 2017, however, the whole market began to change from an incremental market to a market of existing stock. Our sales during 2017 "Double 11" season were not very good, with almost little growth when compared with that of 2016. In this case, our company would easily suffer a market decline if without any strategic reform.

One of the major differences between internet companies and traditional companies is that if a traditional company ceases to grow, its curve of decline is generally smooth, while for internet companies it would be a fall off the cliff. That means, the latter's growth is very fast, yet the possible decline is very fast as well, because the mode of customer flow has changed. In traditional business environment, for example, you'd set up a million chain stores, and if one store is vacant, there are still people in other stores. In such a physical form, the customer flow is static. On the other hand, in the internet business environment, the flow is dynamic, which means if you make one mistake or are not doing well enough, customers would instantly turn to another company at a minimum cost.

It is not until 2017 that we realized this problem and started to transform. In general, we are emphasizing the significance of innovation to an unprecedented level. In the past, we used to focus on the innovation of business models. Since 2017, our focus has shifted to that of products and user experience. Correspondingly, there are two other changes: one is the change from the single category of nuts to the full-category of snacks, and the other is from online branding to omni-channel branding. Therefore, during the "Double 11" season in 2018, the sales volume witnessed a substantial increase.

For entrepreneurs, you must do the right thing at the right time. At different stages of corporate development, the focus may be different. You just cannot start with product upgrading, because your initial capital is insufficient. Thus, the first thing you consider is how to survive. Over the past six or seven years, the focus of the Three Squirrels had not been entirely on the innovation of product itself. Due to the surge of e-commerce dividend and the increase of online shopping, it was not so difficult to attract enough consumers as long as your products were identical to those offline ones, your prices comparatively lower, your service guaranteed, and your sales platform is viable. Hence, at that time, our main consideration was to increase productivity, to make enough products and to ensure quality. Nowadays, with the increasing competition in this newly developed field of retailing, the price gap has been narrowed, the amount of customers is no longer growing, and they have become more selective. Then the enterprises need to take product innovation as their core value. The case is like that, when you were the only peddler selling tea flavored eggs near a train station, you would not bother too much about product upgrading. The business would still be good. Then a lot of competitors arrived, and you can't continue in this way. You have to quickly sell your products, earn your money, so as to develop better products to compete with others.

Companies evolved from dividend accumulation are much concerned about being surpassed by others. Imagine, there's a company that sells bread very well, because it has identified a specific group of consumers on Internet. Then it would be very happy to sell it every day. However, if this company is incapable of upgrading its products, and merely keeps persuading customers to buy bread online, for the purpose of cultivating their consumption habits, these customers would never hesitate to buy other online brands of bread once they find that other brands are much better. Similarly, when you look at the emergence of some clothing brands on Taobao, you'll find their growth has mainly depended on the dividends brought by e-commerce. Yet, when such brands as Uniglo or ZARA began to sell on TMall, many of those clothing brands on Taobao found themselves in a very difficult situation.

The reason why the Three Squirrels can still survive and fare well is that by that period

of window opportunity, we had completed our accumulation, and had become much stronger than our target enterprises so that they can't beat us. The most important factor in the development of any enterprise is the sense of speed. When opportunities surface, you should quickly grow up to be a good match for any rival, and ascend to your goals step by step. Now, we are also developing offline channels. I need to observe where our real and potential competitors are, and I'm thinking about how to catch up with traditional companies of snack retailing by taking advantage of another window opportunity during the next five or six years.

MI: The Three Squirrels has developed from a mere online retailing store to omnichannel retailing, and has started to establish "Feeding Shops" in 2016. In 2018, it started to try offline stores via Retailing Channels. What do you think of this offline layout?

Liaoyuan Zhang: Concerning the evolution of the overall business environment, we feel lucky to have seized the opportunity of e-commerce. Our opportunity today is for the new model of retailing, which is to balance the relationship between efficiency and cost. Our offline strategy is not so simple as to sell products offline. Instead, we are selecting some efficient channels, such as 2B-based Channels of Distribution and Retailing, which skip the procedure of thirdparty distributors. In a few months after the establishment of this system, our products are directly connected to 250,000 small stores. In





the past, you must have at least 5,000 people to have such an achievement. Now, we only need 12 people, so our efficiency has been much increased. In addition, our "Feeding Shops" and "Squirrel Stores" also exhibit a high efficiency. The utmost concern of our offline layout is efficiency. With high efficiency, our products will have their price advantage when going offline. When the total price of the same product can be reduced by about 30% by such an innovative business model, you're sure to win. Thus, I think our offline development has provided a good opportunity for us.

The Vitality of CEO's Core Capability

MI: In the transformation process of the Three Squirrels, you once proposed and practiced an organizational reform on small and micro businesses, but it was terminated in 2018. How do you think about it?

Liaoyuan Zhang: Let me explain it with an analogy: it would be useless to distribute farmlands to those who know nothing about farming. In fact, the small and micro business is derived from the Amoeba Management System by Kazuo Inamori. This system is based on two prerequisites: corporate philosophy and values which should be mutually consistent and shareable. For us, there is no problem at the level of value sharing, but we do have problems in sharing our business philosophy. Many people are still incapable of self-management. If this management philosophy is not well understood, it is equivalent to the incapability of a farmer in land farming. If you distribute the patch of land to him, it will become more barren, no better than the previous way of collective farming.

What is the System of Amoeba? In my opinion, Amoeba is not a responsibility system of individual contract. Its biggest distinction from non-Amoeba systems is its minimizing of every business unit, and its concretization in evaluating individual performance. After the Three Squirrels terminated its business of small and micro management bodies, the number of units we have retained are very small. Our new





organizational system features more like this: value-based, business-oriented, competitionevaluative and promotion-driven. How to deal with the relationship between values and business is actually quite difficult in organizational management. Enterprises should balance the relationship between the two at different stages of development. For example, enterprises at its early stage should be more value-oriented. With the growth of business, you need to consolidate such values into a standard, a foundation, and then turn out to be performance-oriented. However, many enterprises have failed to grasp these two pivotal points, which is exactly the same as our previous experience.

MI: As soon as you realized the infeasibility of small and micro business, you made the

adjustment in a very short time. Then, in this process of transformation, do you have any other reflections and perceptions?

Liaoyuan Zhang: The biggest lesson I've learned is the overestimation of the organization's role and the neglect of existing core values. All in all, every successful enterprise must have its core spirit, which stems from the most potential characteristics of its founders. Similarly, the good performance of anyone in charge should be attributed to his superiority in certain aspect. Why do people make mistakes? This is only because they have neglected their greatest advantage and have blindly pursued other things instead. For example, I was initially a person with strong marketing ability, but in order to facilitate the functioning of the whole enterprise, I once believed that management was the topmost ability for every CEO. So I ceased improving my own marketing ability, and turned to training other marketers instead, hoping they could do a better job.

Later, I realized that this approach was not effective. Excellent talents should be trained through working with the most competent person. In the previous time of more than half a year, I have turned back to my main line of business, leading my fellows to work on products and marketing. One of my capabilities is product development. Every day I'm doing what I'm good at. I'm still intent on the selection of designs, research and development work, packaging and copywriting for each product, just like what I was doing five years ago. As for other works, I do not bother to pay too much effort, because it would certainly suffice to recruit other reliable people to fulfill the task.

Another reflection of mine is: do not overinnovate. The reason for our unsuccessful endeavor in small and micro businesses is my innate tendency to seek abrupt changes. I was not going to follow others' path. I hoped that everyone in this company would act like an entrepreneur. Everyone should be positively working and capable of earning a lot of money. Later I found out that the idea is somewhat problematic. For example, when we were doing offline management and the "Feeding Shops", we had intended to break the hierarchical structure and to establish a completely flat management model, with 1,000 shop managers directly connected with respective modules of the headquarters, and no regional managers in between.

In fact, when you look back to it, this is not a bad idea, nevertheless, it went too far ahead. It simply ignores the heritage of management experience from the industrialization era. You can improve it, but you can't disrupt it overnight. It's no good for any person to be too innovative, and too ahead of his time. So how should we understand innovation? Starting from scratch is innovation, yet it is also innovation to reorganize all elements and to maximize a particular merit. Look at our present situation, enterprises that are doing well have all got a correct understanding of innovation. Apple, for example, had not made the MP3 player first, but it was able to reorganize various elements to create the popular product of iPod and successfully captured the market.

Broadening Sources of Income, Instead of Reducing Costs

MI: What bothers you the most right now?

Liaoyuan Zhang: I think it is human resources management. The pivotal part of any organization is talents. Chinese enterprises should pay attention to the three advantages China has: (a) China has a very strong capacity in manufacturing; (b) China enjoys a huge consumer market; and (c) China has become the world's largest country in higher education. If an enterprise is able to make good use of these three advantages, it will be a great competitor.

The essence of Alibaba's business is to activate the productive capacity all through China, to get 600 million consumers in connection, and to attract immense amount of talented people. For the Three Squirrels, in the field of food industry, we have activated the productivity of Chinese snack food factories and consumers' needs, but we still shorten of talents.

This situation corresponds to the developing stage of our company. In the first stage of starting-up, compared with large enterprises, you should never expect to have equally sophisticated management and satisfactory human resources. In fact, the number of talents in your company is incomparable with theirs. For most start-ups, their success lies in the following aspects: one, they have seized a rare chance, which is often ignored or refused by larger enterprises. This is a dividend. Two, there must be a passion for the common cause. Start-ups at their initial stage must highly emphasize the significance of corporate values, for the sake of their integrative power. Relatively speaking, individual capabilities may not be so important, because the prominent advantage for such enterprises is their capability in seizing rare chances in market, and the dividend that follows. This is exactly the early history of the Three Squirrels, and such a rapid development had lasted for six or seven years. Yet the seventh year witnessed a terminus, then the dividend was gone. At the beginning, the rapid growth might have concealed all problems, and the prospect of crisis would soon emerge once the growth was no longer there.

When an enterprise is experiencing a crisis

in growth, what will be your choice? To broaden sources of income or to reduce costs? In my opinion, we should broaden sources of income without reducing necessary costs. When the Three Squirrels was facing this growth crisis, we chose to increase wages by 40 percent for everyone in the company. If we had chosen to reduce costs, what would have happened then? Any reliance on the reduction of costs to guarantee the growth rate means that you are literally giving up the chance of growth for the sake of meager profits. Some employees would be disillusioned, for they could no longer expect any bright future. At the same time, reducing costs would set limits to the recruiting of external talents. During that period, our first response was that we chose to broaden sources of income instead of reducing costs, and tried to efficiently exploit all resources. Second, we must do everything to identify the next curve of growth and to reorient the company back on track. Third, we should vigorously attract new talents to start another round of entrepreneurship. Currently, we are at the third stage.

MI: What is the possible profile of the Three Squirrel consumers, young urban people?

Liaoyuan Zhang: Actually, no. We hope it is a popular brand for a larger population. In terms of market positioning and meeting demands, consumers may think this is a white-collar brand, but our pricing is actually economical. The key to market positioning is to identify a goal in the minds of consumers, which does not mean that

I must push such things to you after this. You've said our brand has targeted the white-collar youth born after 1985 and 1990. There's no mistake in it, but the vast number of consumers living in the third- or fourth-tier cities are also our loyal customers. Look at Uniqlo, what kind of brand is it? White-collars working in the first or secondtier cities can wear it as daily consumer goods. People in the third- or fourth-tier cities can also afford it. Such a brand can be very successful because of the high amount of its potential customers. Therefore, market positioning is sometimes similar to the fixing of weathervane to detect the changes of consumption. The customers of Three Squirrels must be beyond urban youth. Our target is the consumption groups of family members. We hope whether they are grandparents or parents, brothers or sisters, all of them would like our snacks.

MI: It is true that the price is quite relevant here. While the urban youth are culturally identified with the brand of Three Squirrels, the affordable price of your brand is attractive to all types of consumers, right?

Liaoyuan Zhang: Yes. Another key point is that the Chinese people are becoming more and more rational in their consumption. Rational consumption is different from that of the middle class in the past decades. In the past, the middle class tended to show off themselves, but today's consumers are first of all rational ones. Even though they still tend to show off, what they like to show off is their own individuality. When such a



rational idea prevails, they would no longer prefer the more expensive to the more appropriate. Customers will choose what is most suitable for themselves. Here's the opportunity that Netease Selected has exploited, and the market it has explored, which proves that a good life is not necessarily so expensive.

Competition of Supply Chain in the Future

MI: What would be the biggest threats in the future?

Liaoyuan Zhang: It will depend on what we do. The superiority of our speed in product innovation over those traditional enterprises determines who

would win the battle in the end. Our core task is to go back to making products. In terms of the speed in product innovation, we have advantages that traditional enterprises have never had because we can operate with more categories under one brand. At the same time, we have offline channels of direct stores. franchised stores and alliance stores. We are guicker to promote new products online. For traditional enterprises, they need to develop a number of distributors and corresponding channels, which is different from our system of competition. Traditional enterprises build their own factories in order to make a liberal use of their single brands, which usually takes at least one or two years for the maturation of one product in market. However, the Three Squirrels would merely need several months to provide a new product, at a very quick pace. For example, if I'm promoting a drink and its cost is RMB4 per bottle, I will sell at the price of RMB4. Just let everyone have a try. If it's good, that's it. If not, I'll readjust it. I can quickly promote the products and get in direct contact with customers via Internet. Nevertheless, for traditional enterprises, they need to do advertising to ask distributors to purchase their products and then send them to the stores. In addition, my factory is comprised of flexible production lines, which means outsourcing production. So we can guickly adjust the specifics of any product.

MI: In the snack food market, there's a rather serious problem of product similarity. How does the Three Squirrels keep its own characteristics?



Liaoyuan Zhang: There are several key words in our positioning of products: flavor, fun and freshness. The definition of flavor is that the product should be unique enough to distinguish itself from other brands and be adjustable in time. What consumers want is flavor. If it doesn't taste good, no one will buy it. As for fun, snacks used to be merely consumed in leisure time, but now they have become indispensable necessities in people's lives. Except for being delicious, eating snacks has become a kind of fun, which may entertain other people and become a token of socializing. For example, our giant snack packages have been selling very well. When boys mail such a product from afar to their girlfriends, and when girls open such a huge package, they would feel so delighted that they share pictures of it on WeChat Moments. Therefore, snacks are not only food, but also an indispensable way of emotional expression in daily life. The concept of freshness is also very important for products. The

next challenge for the Three Squirrels is to fix a strategy to retain freshness across all production and distribution lines. For most products, we will shorten their shelf life to three months, and will ensure that the products received by consumers are produced within the last 20 days.

Now we are dealing with digitalized supply chain, in the hope that we can use digitalization to solve the information asymmetry, and by all means to shorten the distance between factories and consumers. Maybe in the near future, the simultaneity between ordering and production can be realized. At present, we are developing a digitalized supply chain, called "Squirrel Cloud Manufacturing System". Its core mission is to shorten the distance between consumers and factories, so that all activities in each procedure and in each section are reflected in this APP. The consumer places an order today and we ship it tomorrow with the product to be made overnight. This is the ideal we want to achieve.

MI: In fact, your overall control of the supply chain will also become your core capability.

Liaoyuan Zhang: Yes. Actually, in the end, all the capabilities result in the capability of supply chain control. The product innovation I've just mentioned is all about "techniques"". The ultimate "Tao" is that you have the capability to control the supply chains while others do not have. Although I don't own any specific factory, with this system I accomplished earlier than others. The factory that receives my order will greatly improve its speed of supply and many other issues once it is connected to our system. Additionally, the consumers' feedback will also be much quicker.

The present situation is that information is fragmented. For instance, in most companies, the sales staff first make a budget, check the amount of goods in need, and then send the orders to the logistics and purchasing departments. The purchasing department then relays the orders to the factories. This process is common among most companies. However, in the future, there must be a change. The sales staff should place orders directly with the factories. If so, the intermediate link can be omitted.

Currently, our Squirrel Cloud Manufacturing System is but a quality control system, involving only one intermediate link and in lack of any integrative function. We hope it would include three aspects in the future. First, it may guarantee a Super Freshness mode of "consumers to factories", which can quickly respond to consumers' needs, such as ensuring the completion of delivery within 20 days. Second, it can provide a comprehensive quality assurance. Third, it can provide all effective data to be utilized by every link in the system so that everyone will be facilitated to make more accurate decisions. For example, when the factory receives an order, it knows about all the background information, such as where the product was sold in the past, how well it was sold, at what price, and what the logistics situation was. After such analysis of information, the factory can make better decisions and rationally arrange the production capacity.

