The secret sauce for organizational success: Managing and producing star performers

Herman Aguinis, Kyle J. Bradley

Elon Musk, chief executive officer (CEO) and chief technology officer (CTO) of SpaceX and CEO of Tesla Motors, has produced monumental achievements. Starting with the creation of the online purchasing service PayPal, he has been driven to create companies and products with an immense and worldwide impact. Driven by his desire to protect the earth and provide a sustainable future for humankind, Musk has been at the forefront of several industries, ranging from electric cars produced by Tesla to privatized space exploration with SpaceX. While Musk has proven to be a very successful leader and entrepreneur, he does not stand alone as an example of star performance. Indeed, looking across industries, we find numerous people who have produced outstanding results. For example, Howard Schultz, the CEO of Starbucks, helped his company grow tremendously despite the struggling U.S. economy. Starbucks now stands as the largest coffeehouse company in the entire world. On the popular internet video site YouTube, there are numerous examples of individuals becoming millionaires due to the high volume of Internet traffic they bring in to their channels. They have been able to separate themselves from other video uploaders and accumulate a significant amount of personal wealth. How about sports? Quarterback Peyton Manning stands as a visible example of the influence that stars can have on an organization. In the 2013 National Football League season, Manning led an explosive offense to the Super Bowl and set numerous individual records along the way, including most passing touchdowns in a season, most passing yards in a season, and most games in a season with at least four touchdown passes. Manning’s influence on American football is so great that he has been voted the league’s most valuable player a record-setting five times.

STAR PERFORMERS: WHO ARE THOSE PEOPLE?

While the accolades received by star performers bring recognition to themselves, often overlooked is the influence that they can have on those around them. If we use a pizza pie analogy, Manning’s slice is larger in comparison to the other players on the team (e.g., higher salary, more awards, greater media recognition, and more lucrative endorsements). Star performers also have the effect of making the pizza pie larger for the entire team. Because of Manning’s influence on the team, the 2013 Denver Broncos also had five players with 10 or more touchdown catches in a season, breaking the previous record by two players. In short, star performers produce more than other individuals, help increase the productivity of those around them, and have an important impact on the performance of their organizations as a whole.

Star performers are referred to by using different labels such as scale tippers, difference players, difference performers, and game changers. Throughout our article, we refer to these individuals who perform at extraordinary levels as stars. According to Herman Aguinis and Ernest O’Boyle, star performers are individuals who “consistently generate exorbitant output levels that influence the success or failure of their organizations and even society as a whole.” What makes these performers special then is not that they possess some specific bundle of competencies, but instead that they produce output at high levels. Star performers are not only found in the executive suite or in the form of extremely successful entrepreneurs and athletes, but exist throughout all levels of the organization, from frontline workers all the way to the top, as we describe next.

STAR PERFORMERS ACROSS INDUSTRIES AND TYPES OF JOBS

While the contributions and value-added of Musk, Schultz, and Manning are extraordinary, recent research results show that the prevalence of star performers is not. In a set of studies we conducted over the past five years involving more
than 600,000 researchers, entertainers, politicians, and athletes, we discovered that the performance of individuals typically does not follow a normal distribution, but instead follows a power law distribution. To show this phenomenon graphically, Fig. 1 presents differences between these two types of distributions. In this figure, the solid black line shows a typical normal curve, which has the characteristic bell shape. In this type of curve, the majority of scores fall close to the mean μ (i.e., the center of the distribution), with relatively few scores falling at either the low or the high extremes. What this implies is that the majority of individuals are assumed to perform at an average level, with very few people actually achieving a level of performance that would place them in the category of being a star performer. This is the distribution that most researchers in management and related fields (e.g., industrial and organizational psychology) have used to describe performance scores in the past. In fact, many organizations like G.E., IBM, and Sun Microsystems had or have systems in which they force a normal distribution on the performance ratings of individuals by requiring managers to assign a set percentage of their people to each of the performance categories in order to create a normal distribution. Even some business schools do it: the Yale School of Management requires classes to be graded according to the normal distribution, and so does the Tuck School of Business at Dartmouth for their required M.B.A. classes. This practice restricts the number of students who can get top grades and instead clusters the majority of students around the average (i.e., center) of the distribution.

Rather than a normal distribution, our research suggests that performance usually follows a power law distribution, shown in the gray area in Fig. 1. There are two important implications that derive from differences between these two lines. First, the power law distribution has a longer tail than the normal distribution. Under this type of distribution, we would expect to see many more star performers than under the normal distribution. For example, O’Boyle and Aguinis gathered journal publication data for over 25,000 researchers across more than 50 scientific fields including physics, dentistry, history, mathematics, social psychology, social work, and many others. If the data followed a normal distribution, there should be approximately 35 researchers with about 10 publications or more each (three standard deviations above the mean). In contrast, results showed that there were 460 individuals who have produced that high number of scientific publications. The contrast between what was expected based on a normal curve and what the empirical results showed is included in Fig. 2’s Panel A. This number is more than 13 times as many as what would be expected if the normal distribution were true. This same result was replicated across a variety of jobs as well. In a sample of 3,300 entertainers that were nominated for a Grammy, five would be expected to receive at least 10 nominations under a normal performance distribution. However, 64 artists have received more than 10 nominations (see Fig. 2’s Panel B). Out of 8,976 individuals to have served in the U.S. House of Representatives from 1789 to 2009, 13 are predicted to have served 13 terms or more if the normal curve represented the data well. However, 173 representatives have served over 13 terms (see Fig. 2’s Panel C). This same pattern appeared time and time again, regardless of the type of industry and job. It is becoming apparent that the performance distribution is not normal in most cases and, consequently, star performers are more common than previously assumed.

A second implication of differences between a normal and power law distribution refers to the location of the mean (i.e., average) score. The presence of stars pulls the average of the distribution to the right (i.e., higher average) compared to a normal distribution. Consequently, in a power law distribution, the majority of individuals have performance scores that are below the mean (see Fig. 1). The different location of the distribution’s average in a normal versus power law distribution has important implications for management practices. For example, if an organization implements a performance evaluation system that forces a normal distribution when performance actually follows a power law distribution, several star performers will be rated as average performers. This could have demoralizing effects on the individual and result in loss of motivation, drops in performance, or even turnover of some of the organization’s most valuable human capital. Our research suggests it is time we change management theories and practices so that we conceptualize the distribution of performance as being non-normal instead of changing the data to fit our existing, and often incorrect, conceptualization.

**STAR PERFORMERS AND THE NATURE OF WORK IN THE 21ST CENTURY**

In retrospect, recent empirical results regarding the non-normal distribution of performance are not too surprising. When we look back at the history of work, especially in the United States, it becomes clear why there has been a shift from a normal distribution to a power law distribution. At the start of the 20th century, the economy was driven by manufacturing. In 1913, Henry Ford perfected the assembly line in helping to build the Model T automobile, and other manufacturing companies quickly adopted this method. Subsequently, the majority of individuals through the early part of the century were working on assembly lines to produce
goods. In this type of work environment, the normal distribution does a relatively good job of describing performance. As the performance of individuals was largely controlled by the speed of the assembly line, the majority of workers fell around the average, with only a few star performers emerging. In essence, it would be unexpected to see anything that deviated much from a normal distribution. Comparing where we are today with the early part of the 20th century, it is easy to see that we are no longer a manufacturing oriented economy, but a service oriented economy. Now most people are not working behind assembly lines, but instead are working to produce services. In this type of a work environment, machines no longer control the rate of production, but instead individuals are able to take control of their own performance. What we are starting to realize now is that under these conditions, a greater number of people are emerging as star performers, and the normal distribution usually does not fit the type of work done in the 21st century.

In addition to the shift from a manufacturing to a service oriented economy, other changes have occurred that have influenced the shift to a power law distribution. Among these changes are new technologies such as the Internet and telecommunications, which have increased the speed of business and have made the world considerably smaller. The ability of organizations to instantly reach practically every corner of the globe has greatly increased the potential that people have to become star performers. Even the talent pool that exists now and will exist in the future is contributing to the shift. As education around the world is improving and producing more highly educated individuals, it is not surprising that we would expect to see a larger proportion of star performers than what is predicted by the normal distribution.

We know that the nature of work has changed since the beginning of the 20th century; however, many of the management practices used in organizations today assume that performance is normally distributed. These practices range from compensation to employment decisions such as selection and termination. So with all of these changes that have occurred it is important to ask the following questions: What should managers do differently now that we know performance is usually not normally distributed? How can managers implement practices that help to recruit, motivate, and retain those stars that provide the most valuable results to their organization, while at the same time taking care of everyone else in the organization? The remainder of our article addresses these and other related questions. As a preview, Table 1 offers a summary of the recommended practices that can be implemented to better manage a 21st century workforce given the discovery that performance is not normally distributed.
Table 1  Summary of Practices that can be Implemented to Manage and Produce Star Performers.

<table>
<thead>
<tr>
<th>Practices</th>
<th>Implementation Guidelines</th>
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<tbody>
<tr>
<td>1. Transparency and Fairness in Policies</td>
<td>• Be open and fair about policies and procedures</td>
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<td></td>
<td>• Provide everyone the opportunity to become a star performer</td>
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<td>2. Structure of Work</td>
<td>• Remove situational constraints that impede performance</td>
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<td></td>
<td>• Allow stars to rotate through teams rather than staying on a single team</td>
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<td></td>
<td>• Manage the developmental network of individuals both inside and outside of work</td>
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<td>3. Training and Development</td>
<td>• Provide training focused on improving performance of stars even further</td>
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<td></td>
<td>• Identify and train individuals whose performance is central to the strategic goals of the organization</td>
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<td></td>
<td>• Use stars as a source of mentoring and coaching to help others become stars</td>
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<td>4. Employment Decisions</td>
<td>• Hire individuals based on performance in addition to “fit”</td>
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<td></td>
<td>• Focus on retaining individuals who hold strategically important positions in downsizing decisions instead of cutting equally across all departments</td>
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<td></td>
<td>• Signal the importance of star performance even in times of organizational duress</td>
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<td>5. Compensation</td>
<td>• Compensate individuals based on performance, not longevity or other non performance related factors</td>
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<td></td>
<td>• Pay dispersion should not be seen as something negative as long as heterogeneity in compensation exists based on fair, transparent, and performance-based procedures</td>
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<td></td>
<td>• Shift the focus from rewarding what has been done in the past to a system that is also present- and forward-looking</td>
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<td></td>
<td>• Offer creative solutions to meet individual needs, such as through the use of I-Deals</td>
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OK, I BUY IT… NOW, WHAT CAN I DO TO MANAGE AND PRODUCE STAR PERFORMERS?

In this section, we discuss how organizations can manage and produce star performers effectively. We describe recommendations regarding transparency and fairness in policies, the structure of work, training and development interventions, employment decisions, and compensation practices.

Transparency and fairness in policies

Transparency and fairness in policies is a fundamental principle to manage and produce star performers. Fairness does not mean equality in terms of rewarding everyone the same. Rather, fairness means that everyone is given the same opportunity to become a star performer. To do so, it is important to be transparent regarding the relation between specific employee behaviors and results with rewards. In other words, the “rules of the game” must be clear and known by everyone—those who are already producing at a star level and those aspiring to become stars. By being transparent, organizations can signal the path that individuals need to take in order to become stars themselves. It can also help to alleviate any animosity and resentfulness that non stars may feel toward stars who appear to be rewarded based on preferential treatment. Rather than looking at stars that seem to be receiving special treatment and feeling frustration, transparent policies can help individuals view the organization as being fair toward everyone. Again, as individuals see that they have the same opportunity to become stars themselves, those negative emotions can be changed to more positive feelings that help improve motivation.

Chipotle Restaurants stand as an excellent example of an organization that has focused on treating employees fairly. They have placed a large emphasis on allowing employees to move up the ranks based on their performance. Thanks to their efforts, employees who now work on the burrito line have the opportunity to move up in the organization to senior management positions. By creating a fair and transparent promotion process through which all employees can benefit, Chipotle has been able to identify and produce stars in their organization.

Structure of work

The second recommendation is to remove situational constraints that can unleash star performance. For example, if an individual is bogged down by paper work following a sale, the organization could consider providing an assistant to ease the workload and allow the salesperson to continue to be productive. It is in the best interest of the manager to find and eliminate situational constraints that stand in the way of individual productivity. However, in most situations, it would be impossible to eliminate all of the situational constraints for all individuals. For instance, it would not be a feasible solution to hire an assistant for every individual in the workplace to reduce the amount of paperwork that he or she needs to complete. Instead, managers are likely to see the greatest benefit if they are able to allocate their limited amount of resources to help star performers continue to produce at a high level—or even higher.

In addition to removing situational constraints that may be hindering individual performance, managers should also consider how to form and manage teams. This is especially important for managing stars, as they rely heavily on their networks to help them perform. Consider the case of Abby Wambach, a U.S.A. National Team soccer player who holds the world record for most international goals for both female and male athletes. She eloquently said: “I’ve never scored a
goal without getting a pass from someone else.” Accordingly, managers should leverage their star performers in team settings. This can be accomplished by allowing star performers to rotate in and out of teams instead of keeping them locked down in one specific team. Several benefits result from this practice. First, as stars rotate through teams, they will be able to have an impact on several other individuals. For instance, by having a star on a team, the performance norms and expectations for the whole team will increase as well. Through the influence that a star brings to the team, the other members will be expected to also perform at a higher level. This can help to “clone” star behavior throughout teams in the organization. In addition to positively influencing others, allowing stars to rotate through teams can also impact a star’s commitment to the organization. Rotating stars through teams can help them build an internal network with other members across the organization. Subsequently, this network becomes a way in which the star can become more embedded within the organization, as networks generally are not mobile across organizations. By rotating stars through teams, managers can further embed the star within the organization.

W.L. Gore and Associates has built their organization around this idea of fluid team structures. Rather than a traditional hierarchy, member of the organization work in a lattice-like network. Stars are able to form teams comprised of members from across the organization in order to address pressing issues. When the matter is resolved, the team members return to their normal functions. This allows stars to build their own network within the organization, regardless of the team member’s function, while at the same time allowing the star to positively influence a large number of individuals throughout the organization.

Finally, managers also need to be aware of the stars’ developmental networks. Stars have networks both within and outside of work. At work they have teams, contacts, friends, managers, and subordinates. However, outside of work people also rely on large networks. For instance, significant other and family needs and concerns may dictate whether an individual stays with an organization or find work in a different geographic location. Organizations can help retain stars by also focusing on embedding their developmental networks within the organization. For example, providing a significant other with a job within the organization may help keep a star in an organization that may have otherwise left to seek work elsewhere. Organizations have the ability to influence not only the developmental networks of stars within the organization to help them stay, but they can also have an impact on the networks that exist outside as well.

Training and development interventions

Instead of focusing resources on the average workers, managers should recognize that small, incremental improvements to star performers can have a much larger impact than trying to shift all individuals up the performance scale. Therefore, it may help to focus training initiatives on the competencies that will help star performers increase their productivity even more, rather than focusing on training that tries to improve more general competencies throughout the entire organization. By targeting specific competencies and people who would help the organization benefit the most, it would be possible to make sure that resources are being used in the most effective way possible.

In addition to offering focused training for stars, managers should also consider which people are going to be the most central to the organization’s strategic goals. This is important even when managers only consider stars. For example, there may be stars in several departments of a sales organization, including in human resources (HR) and on the sales team. Although the HR star performer is a star in his specific field, the impact that he has on an organization’s performance may not be as great as the impact that a star salesperson has on overall organizational performance. If this is the case, it would be more important to use resources in helping to develop the star salesperson rather than the star HR employee. By targeting those individuals that not only perform the best, but also perform the best in an organization’s core and strategic competencies, managers can allocate resources in a way that will provide the most benefit to the organization as a whole.

Finally, managers should use stars to help train and develop others within the organizations. In their work on how Bell Labs creates star performers, Robert Kelley and Janet Caplan suggest that those who receive coaching from star performers are more likely to increase their own performance and become stars themselves. Association with star performers is an important action that organizations can take to improve individual performance of a wide number of people in the organization. Nordstrom is another example of an organization that has implemented practices that facilitate mentoring relationships with their stars that extends through all levels of the organization. Whether training new employees on the sales floor or working on developing new managers, Nordstrom encourages stars to play an important role as mentors to those around them. By using stars as a means of helping others progress, organizations can also clone star performers on an ongoing basis.

Employment decisions

Organizations are constantly faced with making employment decisions, including who to recruit, who to select, and who to let go. One of the worries of making employment decisions is that by making the wrong decision, organizations can start a downward spiral that can lead to an unproductive and unhappy workplace. As some individuals leave an organization and are replaced by new people, there is often a tendency to find those who “fit” best with the culture of the organization. While this can provide some benefits to the organization, there is also the chance that a homogenous workplace can lead to the “cesspool syndrome.” The cesspool syndrome states that “marplots and meddlers” try to replace departing stars with individuals who perform poorly due to their own inadequacy. When this is the case, homogeneity in the workplace can actually lead to organizational decline as stars are replaced with poorer performers. In order to combat this, organizations need to make employment decisions based on performance. If the opposite of the cesspool syndrome were to occur, workplaces could strive to achieve homogeneity of star performance, leading to major organizational advantages. Organizations need to therefore
make employment decisions based on performance, rather than making decisions based solely on how they “fit” with the organizational culture.

In addition to the selection process, stars can be greatly affected by decisions such as downsizing. Downsizing can be a difficult process for organizations to implement successfully. While it may be tempting to make cuts based on rules such as “we let 10 percent of the workforce go across the firm,” this type of broad rule can result in the loss of crucial star performers. Managers should instead work on identifying stars in roles that are essential to the organization before making cuts across all departments. The goal of the cuts should not be to equally reduce the workforce across departments, but instead to retain the most crucial and critical human capital. This can mean, for example, that an organization retains the majority of an R&D (research and development) department at the expense of a greater number of cuts to a sales department. By doing so, organizations can retain the most valuable individuals to the specific goals and strategy of the organization.

While organizations generally try to retain stars in the event of downsizing, the mere occurrence of downsizing in an organization can signal to a star that they should look for work elsewhere. This can lead to a vicious cycle of organizational decline as star performers leave. Because of this, merely failing to fire a star may not be enough to retain her. Instead, in the event of downsizing and times of duress in general, organizations need to direct resources proactively to keep these stars. The SAS Institute has made star retention and development a key focus for their organization. As part of their retention plan, they focus on providing star employees with projects that are challenging and engaging. By completing these projects, their employees become embedded in the organization as they are able to provide successful results. This type of focus on employee engagement, especially in hard economic times, has helped the SAS Institute keep their voluntary turnover rates at a minimum, allowing them to keep, maintain, and clone their most productive employees.

Compensation

Compensation should be handled strategically to manage and produce star performers because it is an important determinant of individual satisfaction, commitment, and motivation. When used properly, it can have noticeable positive consequences. In order to implement a proper compensation plan, managers need to link compensation to individual performance. If this is not done, motivation of stars is likely to drop and can lead to star turnover. If star performers feel that they cannot achieve personal gain for working harder, they are unlikely to put forth the effort to make any kind of improvement—or even sustaining their high level of performance. Additionally, star performers are also more likely to seek out other employment opportunities when they feel that their compensation does not match the positive results that they produce. A star’s departure results in a double hit to organizations as they will not only lose a valuable performer, but will also likely lose that person to a direct competitor.

By basing pay on performance, pay dispersion is likely to increase and also follow a power law. This phenomenon is seen clearly in professional sports, where a minority of players in football, baseball, basketball, hockey and other disciplines produce extraordinary results and are also paid equally extraordinary salaries. While it may seem at first glance that pay dispersion is a negative phenomenon, it can lead to several positive outcomes for individuals and organizations when it is based on justifiable and transparent reward structures. For instance, pay dispersion leads to higher levels of satisfaction for star performers, who can see the immediate benefits and rewards they receive for producing exceptional results. Moreover, pay dispersion can send a signal to all individuals that they have the potential to earn more in the future. In addition, pay dispersion serves as a method of sorting low performers out of the organization while retaining stars. Star performers are likely to remain with the organization as they see the rewards associated with their performance, whereas lower performers are more likely to leave the organization if the gap in pay is large. In reviewing what we understand about pay dispersion, it appears that when pay dispersion is legitimately based on differences in performance, and on transparent and fair policies (as described earlier), individual, team, and organizational level performance, productivity, and safety all improve.

Compensation should also be present- and forward-focused, rather than exclusively past-focused. This is something that can be achieved as organizations look to implement performance management systems instead of merely conducting a yearly performance appraisal and review. Performance management systems require that managers provide timely feedback and rewards through ongoing performance evaluations. If managers are able to reward individuals immediately for the work that they accomplished, it shifts the focus from being a reward for a year’s worth of work to being reward for accomplishing specific goals that add value to the organization. Building on this, managers can place emphasis on linking rewards to specific actions that individuals produce and will produce, providing them with increased motivation. These changes shift the focus of the rewards from being a backwards-looking reward to a forward-facing one.

In addition to rewarding individuals based on performance, managers should also consider implementing idiosyncratic deals (I-deals). I-deals are individually tailored working arrangements that can help to attract, motivate, retain, and produce stars. These I-deals can include arrangements that change the working situation, such as allowing the star to work remotely or a daycare package. In essence, they take into account the individual needs of the individual in developing a tailored package of benefits. IBM has recognized the advantage of rewarding individuals based on personal needs. As a company, they have made an effort to allow employees to telecommute at least some of the time. In fact, many of the jobs that they currently offer are geared toward allowing flexibility in time and location for individuals within the organization. In addition to allowing flexible work arrangements, their benefits packages are customizable, allowing employees to make decisions that will have the greatest beneficial impact on their personal lives. This includes benefits outside of the normal package, including taking time off to volunteer outside of work. I-deals such as these provide a perfect opportunity to help leverage talent in the workforce,
especially from star performers. In addition, they can also provide motivation to average performers to become stars themselves.

SUMMARY

Star performers are game changers for organizations regardless of size and industry. The impact that they have can make or break organizational success and also impact the long-term sustainability and very survival of an organization. As the former CEO of General Electric Jack Welch famously said, “The team with the best players wins.” The recent discovery that the distribution of individual performance in most industries and types of jobs is non normal means that organizations are now tasked with identifying, motivating, retaining, and producing stars to succeed in today’s hypercompetitive and global market. These stars are the individuals who produce a disproportionate amount of results—be it basketball points, shareholder wealth, Emmy awards, sales, or scientific publications. Organizations that succeed will be those that keep a close eye on their current and future stars—those extreme scores that are overlooked and often eliminated in selection, performance management, and compensation systems that assume a bell-shaped performance distribution that typified work in the 20th century. Our recommendations for managing and producing star performers include implementing transparent and fair policies, structuring work to allow stars to emerge and thrive, offering training and development opportunities, making employment decisions conducive to retaining and producing stars, and implementing compensation practices that also aim at managing and producing stars. Implementing such practices may get us closer to reaching one of the most coveted “holy grails” in management: Turning human capital into an unbeatable and long-lasting source of competitive advantage.

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