

Leadership Under Extreme Conditions: A Human Resource Analysis of Ernest Shackleton's Expedition

Nadia Z. Humbert-Labeaumaz

Contents

| | |
|--|-----------|
| Abstract | 2 |
| Introduction | 3 |
| Background: Timeline of the expedition | 4 |
| Method | 5 |
| Findings, Analysis and Discussion | 6 |
| Leading and Inspiring People | 6 |
| Empowering and involving people | 9 |
| Building Capability - People's capabilities are actively managed and developed | 11 |
| Conclusions and Recommendations | 13 |
| Leading by example | 13 |
| Implementing a No Blame Culture | 14 |
| Encouraging Feedback | 14 |
| Increasing Transparency | 14 |
| Identifying Future Needs | 14 |
| Delegating | 15 |
| Summary | 15 |
| Reflections | 18 |
| References | 19 |

Abstract

This paper analyzes Sir Ernest Shackleton's leadership during the Imperial Trans-Antarctic Expedition through a human resource management lens, using the Investors in People framework. Despite the expedition's failure to achieve its original goals, Shackleton's people management turned a potential tragedy into a historic example of leadership under extreme adversity. The analysis reveals a high degree of maturity in inspiring and motivating people, fostering trust, and maintaining morale through transparency and empathy. However, the assessment also highlights critical gaps in delegation, leadership development, and participative decision-making. Shackleton's approach is ultimately characterized by emotional intelligence, adaptability, and resilience, yet constrained by overcontrol and insufficient foresight. The paper concludes with actionable recommendations to strengthen empowerment, feedback culture, and transparency—insights that remain relevant for contemporary leaders navigating crisis and uncertainty in complex organizations.

Introduction

In 1911, the Norwegian explorer Amundsen won the race to the South Pole, beating the British Scott, who died in the attempt. It was a massive setback for the British, who had dominated the exploration world until then. In an effort to restore their reputation, Sir Ernest Shackleton embarked, alongside 27 other crew members, on the so-called “Imperial Trans-Antarctica Expedition” (ITAE) in 1915, hoping to cross Antarctica from sea to sea. At the dawn of World War I, this ill-fated expedition put an end to the great era of polar exploration.

Today, Shackleton’s leadership is studied all around the world as a classic example of leadership in crisis. Indeed, he managed to bring back his entire crew alive, showing an outstanding capacity to adapt to extreme conditions. Despite happening more than a hundred years ago, this case study is still highly relevant in today’s uncertain and fast-moving world.

The objective of this report is to evaluate the people management strategies and practices of Sir Ernest Shackleton during this expedition. The “Investors In People” framework will serve as a diagnostic tool to identify the maturity level of the organization in several indicators. The report will analyze and discuss the findings, then formulate recommendations to help the organization bridge the gap between the current level of maturity (“as is”) and the next level to achieve (“to be”).

Background: Timeline of the expedition

1914 – Departure

Sir Ernest Shackleton set sail aboard the *Endurance* with 27 men, aiming to cross Antarctica from the Weddell Sea to the Ross Sea. The expedition departed London in August 1914, shortly after the outbreak of World War I.

January 1915 – Trapped in Ice

While navigating the Weddell Sea, *Endurance* became trapped in pack ice before ever reaching the continent. For months, Shackleton maintained morale through routine, optimism, and personal engagement with the crew.

October–November 1915 – Leaving the Ship

After being crushed by the ice, *Endurance* sank on 21 November 1915. Shackleton ordered the men to establish Ocean Camp on the ice and redefined the mission to focus on survival and returning home. He led by example, sharing rations and hardships equally.

April 1916 – The Open-Boat Journey

As the ice broke apart, the crew launched three lifeboats and reached Elephant Island. Knowing rescue was unlikely, Shackleton selected five men to accompany him on an 800-mile journey across the stormy Southern Ocean in the 22-foot *James Caird* to reach the whaling stations of South Georgia.

May 1916 – Crossing South Georgia

After two weeks at sea, Shackleton's team landed on South Georgia's uninhabited coast. Shackleton, Worsley, and Crean then trekked 36 hours across the island's glaciers to reach help at Stromness Station.

August 1916 – Rescue of the Crew

Following several failed attempts blocked by sea ice, Shackleton finally rescued all 22 men stranded on Elephant Island on 30 August 1916. Every crew member survived after nearly two years of isolation.

1917 – Return to England

The crew returned to England amid World War I. Though the expedition never achieved its geographic objective, Shackleton's leadership became a timeless model of resilience, morale management, and crisis navigation.

Method

This paper applies the Investors in People (IiP) framework as a diagnostic tool to evaluate the human resource practices demonstrated by Sir Ernest Shackleton during the Imperial Trans-Antarctic Expedition (1914–1917). The IiP framework provides a structured approach to assessing how effectively an organization leads, supports, and develops its people to achieve its objectives.

The framework is organized around three main pillars:

- Leading – how leaders inspire, motivate, and provide direction.
- Supporting – how people are empowered, involved, and trusted to perform.
- Improving – how the organization builds capability and continuously develops its people.

Each pillar contains a set of indicators assessed across five maturity levels: Developed, Established, Advanced, High-Performing, and World-Class.

In this paper, Shackleton’s leadership behaviours and decisions are analyzed qualitatively against these indicators. Evidence is drawn from documented accounts by expedition members and biographical sources to determine the maturity level of Shackleton’s “organization” (the Endurance crew) within each area. This method allows translating historical leadership actions into measurable people management outcomes and identifying both strengths and development gaps.

Findings, Analysis and Discussion

All the facts exposed in this report are extracted from a series of books written by or based upon writings of members of the expedition: (Alexander, 1998), (Fisher & Fisher, 1957), (Huntford, 1975), (Hurley, 1948), (Hussey, 1949), (Lansing, 1959), (Mill, 1923), (Orde-Lees, 1916), (Shackleton, 1919), (Smith, 2015), (Worsley, 1924) and (Worsley, 1931)

Leading and Inspiring People

Creating Transparency and Trust

The main goals of the ITAE were clear and outcomes-oriented: crossing Antarctica from the Weddell Sea to the Ross Sea through the pole (Daily Mail (London), 11 March 1911 and The Times, 29 December 1913), documenting the entire journey (The Standard, 31 December 1913) and re-establishing the prestige of Great Britain in polar expeditions (The Times, 29 December 1913).

Shackleton also continuously provided a clear and accurate vision to the crew. The legend states that he published an advertisement that read: “Men wanted for hazardous journey. Low wages, bitter cold, long hours of complete darkness. Safe return doubtful. Honour and recognition in event of success” (Watkins, 1949). Although this whole story is probably false, Shackleton did receive many applications from people aware of the mission’s challenges. He built a culture consistent with his vision and discarded the “mad” and “hopeless” applicants, selecting only those who would fit into this culture. Moreover, when the expedition became a survival mission, Shackleton informed the crew that they would eventually have to abandon the ship and made it explicit that the sole remaining purpose of the mission was to return to civilization alive.

Ernest Shackleton communicated considerably with every crew member, mainly through personal interviews. He was genuinely interested in the people and what part of the work they enjoyed the most. He was also recognized for putting his men consistently above himself, and his mere presence was enough to reassure some of them.

Because of his personality and behaviour, the team trusted Shackleton with their lives. On South Georgia Island, two of his men slid down the slope of the mountain, following his example, to outrun the night and the cold. Afterwards, when Shackleton decided to go to Antarctica again, eight of his men returned from different parts of the world to embark with him. A man who sailed with him wrote: “We would have gone anywhere with him without question just on his order” (Worsley, 1931). Only a high-performing leader can generate this kind of trust and loyalty; it is not a happy accident. Consequently, the maturity level for this theme is “High-Performing”.

Motivating People to Deliver the Organization's Objectives

Shackleton recruited most of his men just a few minutes after meeting them. It is consequently doubtful that the crew had an in-depth understanding of the mission's objectives.

Nevertheless, once on the boat, the goals were clear, and the men knew what to do to achieve them. For instance, when a crack appeared in the ice, they immediately jumped overboard with picks and shovels to enlarge the opening and lead the ship to open waters. Also, they realized the lifeboats were their "ultimate salvation", and they had to protect them. To engage his team and generate understanding, Shackleton often backed decisions with evidence. For example, he measured the distance travelled during a day's walk, estimated the time needed to reach their destination, and decided to stop because they would lack food. Also, he was applying the PDCA (*Plan, Do, Check, Adjust*) method literally: he planned to do something (e.g. crossing South Georgia Island), started to do it, checked their progress (e.g. measuring their position) and adjusted their course.

Shackleton endeavoured to motivate his people by continually ensuring that all their basic needs (physiological, safety, love and self-esteem, in the hierarchy of needs theory (Maslow, 1943)) were met. Given the extreme situation, he did not require his men to reach self-actualization. A perfect illustration of his attention to his crew is his brilliant idea to serve hot meals to everyone whenever someone showed signs of weakness, without pointing out the person in need. Moreover, when they abandoned the ship, he helped them through the phases of change described in the Bridges model (McDeavitt, 2012). He raised awareness and eased understanding by speaking to the captain, facilitated acceptance and reduced anxiety by going beyond his function (e.g. preparing breakfast) and reassured the men through his constant presence and optimism. Eventually, they entered the "new beginnings" phase, where they embraced their new mission of returning home by other means.

Otherwise, Frank Wild, Second in Command, supported the crew to deliver the objectives. He was the go-to person for any problem on the ship and realized that merely acknowledging an issue could help dissipate tensions.

Through his optimism, passion and willpower, Shackleton was able to motivate and inspire his people beyond what seems humanly possible. One impressive occurrence is when he managed to lead two exhausted men to walk for 36 hours with virtually no rest, crossing the uncharted part of South Georgia Island to reach civilization. After everything they had been through, they never complained and, "following the example of [their] leader, did [their] utmost to avoid any cause of annoyance (Worsley, 1924). The maturity level for this theme is "High-Performing".

Developing Leadership Capability

Wild seemed to carry all the work on board, and the crew trusted him. However, when left in charge on Elephant Island, he demonstrated a lack of leadership and management skills. For example, he did not see fit to gather enough food to prepare for the winter, relying instead on the constant presence of seals and penguins nearby. Eventually, animals started to leave, generating tensions and stress among the crew. On the other hand, the captain, Franck Worsley, was wild, erratic and impulsive. Shackleton always felt the need to watch him and reduced his authority after he failed to maintain discipline on board during the trip to Buenos Aires.

Line managers are crucial enablers to change (Paauwe, Wright, & Guest, 2013). Here, they failed to meet expectations because Shackleton overlooked their lack of leadership abilities during their recruitment, seduced by their fascinating stories.

Considering the gathered evidence, Shackleton's organization did not do enough to develop leadership capability. The maturity level regarding this theme is, therefore, "Not met".

Overall Performance Review

The overall performance level for this indicator is "Advanced".

In a "High-performing" organization, managers would know precisely to what extent they are expected to lead, manage and develop their people. Furthermore, Shackleton would have been more thorough in recruiting capable managers and would have explained what he expected from them. These managers would also be predictable and would encourage feedback from their people.

Empowering and involving people

Empowering people

Shackleton provided support and information so that his people could work properly and develop their skills. For instance, a seaman made a mistake while manoeuvring the ship and expected Shackleton to be furious. Instead, he quietly helped him fix his error and never spoke of that incident again. Shackleton understood that his people were learning, and it was useless to rehash the past.

However, the maturity level for this theme is only “Developed”. Indeed, Shackleton was omnipresent on the ship and constantly asked for updates, leaving minimal space for his men to be autonomous. In the rare cases where people took the initiative, he reprimanded them. For instance, when Hurley, the photographer, decided to go back to the ship to retrieve negatives, Shackleton gave him a severe scolding, even though films and photographs were Hurley’s responsibilities. Furthermore, Shackleton was reluctant to delegate leadership. For example, he refused to let anyone else deal with issues, even when stuck in his tent suffering from acute sciatica.

This discomfort towards initiatives may be related to Shackleton’s military background and to an era that did not have the same appetite for participative leadership as today.

Participating and collaborating

Wild, Worsley and Hurley were regularly solicited to decide on strategies to adopt (Hurley was involved in this “directive committee” only so that Shackleton could keep an eye on him). Nevertheless, Shackleton always made the final decision and seldom listened to the others. For instance, he ordered to walk through “grave dangers” to reach Paulet Island, even though Worsley was firmly against it. Later, Shackleton decided to attempt another march despite mixed feelings from the others.

With the rest of the crew, Shackleton took action without consulting the people impacted. Despite whalers advising him to wait due to the risk of ice floes, he still decided to leave for Antarctica without sharing these warnings with anyone. Also, he ordered to kill most of the animals during the journey, including dogs as well as the carpenter’s cat. These events provoked resentment from some and had a profound impact on everyone.

In conclusion, Shackleton did consult the crew’s representatives about most of the decisions, but often discarded people’s opinions. Consequently, the maturity level for this theme cannot be higher than “Developed”.

Making decisions

During the expedition, Shackleton repeatedly gave his people responsibilities. On “Ocean Camp”, he divided the crew into five tents. He put people with strong character at their head and trusted them to ensure discipline and maintain morale high. Also, when he had to depart Elephant Island, he left Wild in charge of watching his interests “on [their] return to England”, saying that he had “every confidence in [him] and always have had” (Lansing, 1959). He also asked Hurley to take full responsibility for exploiting the films and negatives. He trusted their ability to make the right decisions, but there is no evidence that he involved them when establishing their level of decision-making.

Shackleton was not open and transparent about sharing information. As discussed above, he did not tell the crew about the warnings from the whalers. Moreover, when his men failed to free the ship from the ice, he was worried that the expedition was over, but he told them it was just a delay. It is an understatement to say that he was not sharing much about his feelings.

Finally, Shackleton was tightly monitoring those trying to challenge the status quo, so that he could prevent them from speaking their mind too loudly. After McNeish confronted him, Shackleton decided to separate him from the rest of the crew as much as possible. This mindset was systemic throughout the organization, as it was also present on Elephant Island, where Orde-Lees was extremely frustrated when Wild systematically discarded his ideas (Orde-Lees, 1916).

The organization showed a “Developed” maturity level here. Indeed, Shackleton trusted and supported people to make some decisions. However, he was not transparent enough about sharing all the relevant information that could have changed the party’s course of action.

Overall Performance Review

The overall performance level for this indicator is “Developed”.

In a better-performing organization, people would take the lead without being perceived as rebels. Shackleton would be more transparent, involve everyone on the ship and listen to what they have to say. Also, independent-minded people would be a source of inspiration for others instead of being ostracized.

Building Capability - People’s capabilities are actively managed and developed

Understanding people’s potential

According to Orde-Lees, Shackleton “[knew] one’s limitation better than one [did] oneself” (Order-Lees, 1914). However, there is no evidence that he actively assessed and supported their learning and development needs to go beyond and achieve their full potential. For example, Orde-Lees, the only reasonable skier among the crew, was surprised that Shackleton did not insist on every man learning how to ski. Even if they had managed to reach the land, it would have been nearly impossible to maintain the expected pace due to their poor skiing skills. Thus, the maturity level for this theme is “Not met”.

Supporting learning and development

Throughout the journey, Shackleton made sure that each idle period was productive. As a result, the crew started to develop as a learning organization by experimenting and transforming this experience into knowledge (Senge, 1990). They learned how to drive dog sleds, which became particularly useful for moving gear and boats on the ice, and they developed their hunting skills, crucial for their survival.

Shackleton tried to make the most out of challenging conditions by encouraging the organization to improve continuously. It was more of an opportunistic tactic than a well-thought-out strategy, however. If the journey had gone as planned, the party would have arrived on the land without knowledge of dog sleds, which could have severely damaged their chances of success. Finally, since Shackleton was only focused on the organization’s goals and not on his men’s personal development, the maturity level cannot be higher than “Established”.

Deploying the right people at the right time

As discussed above, Shackleton’s recruitment process was more focused on character than abilities. He especially looked for optimism and cheerfulness, which he thought were essential for such a perilous journey. This process accomplished its purpose: the crew never gave up, and, despite their differences, they “seem to be a wonderful, happy family” (Order-Lees, 1915).

Nevertheless, the interviews were always concise, and some of the questions seemed utterly random. Macklin, the surgeon, had been accepted after he made a joke about his spectacles and Hussey, the meteorologist, was on board because Shackleton was “amused to [receive an] application from the heart of Africa” (Hussey, 1949). On the other hand, Shackleton did not consider it necessary to acquire basic skills, such as skiing, even though one of the organization’s objectives was to travel through Antarctica as quickly as Amundsen, who heavily relied on skis and sled dogs.

During this journey, Shackleton faced many situations he did not anticipate. As explained in (Markides, 2000), no strategy remains the same forever. When external conditions forced Shackleton to a strategic change of direction, he adopted a dynamic capabilities approach. He used his in-depth knowledge of his men to assign them the right tasks, maximizing efficiency and likelihood of success. For instance, he chose the carpenter to come on the *James Caird* because of his abilities as a sailor. Also, he took advantage of the photographer’s survivalist skills to fix and improvise equipment despite the lack of tools.

The maturity level for this theme is “Established” because Shackleton did not ensure that critical roles were adequately filled. As an example, he did not put much effort into finding a dog driver when he realized it would not be easy. He even discarded a ship’s officer who had travelled with Amundsen and left for Antarctica without a dog driver.

Overall Performance Review

The overall performance level for this indicator is “Developed”.

A better-performing organization in this indicator would have identified the learning and development needs of its members and provided them with opportunities to learn and develop in line with the organization’s objectives. Also, it would have invested purposefully in people’s personal development and assessed the outcomes of this investment. Finally, it would have identified the organization’s needs in terms of capabilities and found people to fulfill them.

Conclusions and Recommendations

Shackleton was a leader who could get people out of trouble in an extraordinary way. Every person who worked with him has praised his leadership, and he is probably the reason why the whole crew made it alive. However, his lack of transparency and his inability to anticipate future needs have had a significant role in the failure of the original mission. In this regard, he acted like an over-protective father who genuinely wants to take care of his children but believes he always knows best, leaving them unprepared to be on their own.

The following graph displays a summary of the organization’s overall performance.

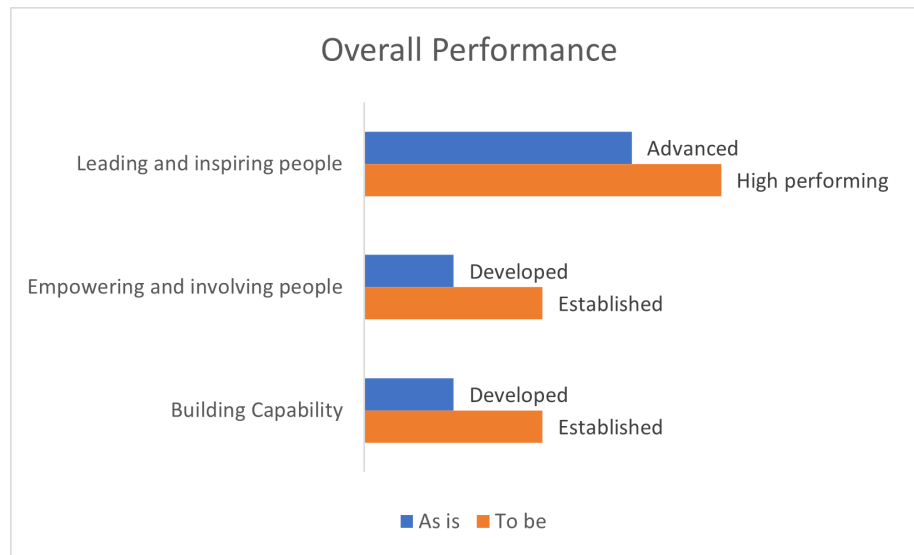


Figure 1: Organisation’s overall performance

This section will formulate recommendations to help the organization move forward and improve.

Leading by example

During this expedition, the organization had to face extremely changing situations. Shackleton played a crucial role in helping it get through these changes by maintaining “levels of energy and momentum throughout the ... process” (Howlett, 2018). Moreover, studies have shown that leaders who, like Shackleton, “act creatively”, make themselves “available for creative emulation, which in turn produces more creativity in followers” (Jaussi & Dionne, 2003). These behaviours should be continued to keep performing in these areas.

Implementing a No Blame Culture

The crew functions as a high-reliability organization (HRO), where any error “could lead to the destruction of the organization” (Roberts, 1990) and thus requires “nearly error-free operations all the time” (Weick & Roberts, 1993). In this context, it is recommended to adopt a “no blame” approach, creating an “atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety-related information” (Reasons, 1997). (Provera, Montefuco, & Canato, 2010) demonstrated that HRO can benefit from implementing a no-blame culture to ease communication, share knowledge, and be prepared for variability.

Encouraging Feedback

Shackleton did his best to mute the voices of people who disagreed with him. This behaviour ignored the potential of the team and diminished the effectiveness of the strategies he designed. (Gratton, 2011) indicates that open innovation is crucial for organizations that want to create innovative and effective strategies. Open innovation implies that members at every level of the organization are solicited to participate in highly strategic debates. Different opinions should be embraced because they enable the discovery of more innovative ways to achieve the organization’s objectives. The goal is to create a culture where everyone’s participation is encouraged and valued, fostering creativity and innovation (Robinson, 2001), and to become a learning organization where people are more intelligent together than apart (Senge, 1990).

Increasing Transparency

This report highlighted that Shackleton lacked openness and transparency in sharing relevant information and his feelings. A study found that “transparent leadership” boosts employees’ creativity (Han, 2017). The idea is that leaders should share information, reveal the reasons behind their decisions, and express their true feelings and vulnerabilities. Moreover, (Gratton, 2011) showed evidence that employees’ participation creates more value when leaders give them access to rich data, including confidential data about the organization.

Identifying Future Needs

Shackleton communicated extensively with people on an intimate level. As a result, he knew them well, and that is a behaviour that should be perpetuated. However, he did not accurately assess the organization’s future needs and thus was not able to proactively develop his people to fit these needs while fulfilling their aspirations. Also, the recruitment process was sometimes random because of this lack of future thinking.

The ESTEMPLE analysis is an appropriate and efficient tool to identify the organization's future needs and design a learning strategy accordingly. It is then easier to recruit competent people and develop them to align with this strategy.

Delegating

Evidence has shown that Shackleton sometimes struggled to delegate, particularly in leadership. To move forward and improve, he could have empowered his people and provided them with enough autonomy. For instance, it would be beneficial to transfer the complete implementation of some decisions to other crew members. Indeed, several studies support a positive relationship between delegation and “both idea generation and application behaviour” (de Jong, Hartog, & Deanne, 2007).

Summary

The figure and table below summarise the key recommendations, including the estimated effort required for implementation, the potential impact on the organization, and the indicators they will improve. This device allows prioritizing the implementation of recommendations.



Figure 2: Recommendations ROI

| # | Recommendation | Relevant indicator |
|---|--|---------------------------------|
| 1 | Implementing a “no blame” culture | Empowering and involving people |
| 2 | Encouraging and valuing feedback | Empowering and involving people |
| 3 | Sharing all relevant information | Empowering and involving people |
| 4 | Sharing true feelings | Leading and inspiring people |
| 5 | Identifying future needs | Building capability |
| 6 | Recruiting competent and relevant people | Building capability |
| 7 | Delegating the implementation of decisions | Empowering and involving people |

Reflections

The stories about Shackleton always depict him as the hero. By reading them, one could forget that the original mission was a total failure. It creates a bias that clouds judgment when analyzing people and cultural strategies. In this context, using the “Investors In People” framework allowed us to take a more objective approach, free from the emotions provoked by the situation. The diagnosis exposed Shackleton’s flaws while highlighting his strengths.

Shackleton’s leadership abilities, which he is known for, remain accurate after the formal diagnosis. Nevertheless, the diagnosis revealed that the organization has an area for improvement in the development of leadership capability.

Regarding empowerment, the formal diagnosis provided strong objective evidence that Shackleton did not involve his people enough, nor did he encourage feedback and diverse opinions among the crew. He only delegated when he had no choice, and that did not always go well.

Finally, stories make it easy to overlook Shackleton’s poor planning skills and lack of future thinking. Indeed, they usually insist on his ability to rearrange the internal context of the organization to adapt to external challenges. However, they forget that he may be one of the reasons why the ship is in such a desperate situation in the first place.

References

- Alexander, C. (1998). *The Endurance: Shackleton's Legendary Antarctic Expedition*. New York: Knopf.
- de Jong, J., Hartog, D., & Deanne, N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10, 41-64.
- Fisher, M., & Fisher, J. (1957). *Shackleton*. London: James Barrie Books Ltd.
- Gratton, L. (2011). Workplace 2025 - What will it look like? *Organizational Dynamics*, 246-254.
- Han, Y. (2017). *How Leaders' Transparent Behaviour Influences Employee Creativity*.
- Howlett, W. (2018, November 7). *Change Management*. Retrieved from CIPD: <https://www.cipd.asia/knowledge/factsheets/change-management>
- Huntford, R. (1975). *Shackleton*. New York: Carroll & Graf Publishers.
- Hurley, F. (1948). *Shackleton's Argonauts*. Sydney: Angus and Robertson.
- Hussey, L. (1949). *South with Shackleton*. London: Sampson Low.
- Jaussi, K., & Dionne, S. (2003). Leading for creativity: the role of unconventional leader behavior. *Leadership quarterly*, 14, 475-498.
- Lansing, A. (1959). *Endurance: Shackleton's Incredible Voyage*. New York: Carroll & Graf Publishers.
- Markides, C. (2000). *All the Right Moves: A Guide to Crafting Breakthrough Strategy*. Boston: Harvard Business School Press.
- Maslow, A. (1943). *A Theory of Human Motivation*.
- McDeavitt, J., K.E., W., R.E., S., & G., W. (2012). Understanding change management. *PM&R*, 4(2), 141-143.
- Mill, H. (1923). *The Life of Sir Ernest Shackleton*. Boston: Little, Brown and Co.
- Orde-Lees, T.H. (1916). *Diary*.
- Paauwe, J., Wright, P., & Guest, D. (2013). *HRM and Performance: What do we know and where should we go?*
- Provera, B., Montefuco, A., & Canato, A. (2010). A 'No Blame' Approach to Organisational Leadership. *British Journal of Management*, 21, 1057-1074.
- Reasons, J. (1997). *Managing the Risks of Organizational Accidents*. Aldershot: Ashgate.
- Roberts, K. (1990). Some characteristics of one type of high-reliability organisations. *Organization Science*, 1, 160-176.

- Robinson, K. (2001). *Out of Our Minds: Learning to Be Creative*. Capston Publishing Ltd.
- Senge, P. (1990). *The Fifth Discipline: The Art and Practice of The Learning Organization*. Currency.
- Shackleton, E. (1919). *South! The Story of Shackleton's Last Expedition 1914-1917*. London: Heinemann Publishing House.
- Smith, M. (2000). *An Unsung Hero: Tom Crean - Antarctic Survivor*. Seattle: Mountaineers Books.
- Smith, M. (2015). *Shackleton: By Endurance We Conquer*. London: Oneworld Publications.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Watkins, J. (1949). *The 100 Greatest Advertisements 1852-1958: Who Wrote Them and What They Did*. Mineola, NY: Dover Publications.
- Weeks, A. (2018, December 17). *PESTLE Analysis*. Retrieved from CIPD: <https://www.cipd.co.uk/knowledge/strategy/organisational-development/pestle-analysis-factsheet>
- Weick, K., & Roberts, K. (1993). Collective mind organizations: heedful inter-relating on flight decks. *Administrative Science Quarterly*, 38, 357-381.
- Worsley, F. (1924, August). Crossing South Georgia. *The Blue Peter*.
- Worsley, F. (1931). *Endurance: An Epic of Polar Adventure*. London: P. Allan & Co.