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THE SINKING OF THE SCHOONER *SOFIA* AND HOW ITS CREW
UTILIZED ADAPTIVE LEADERSHIP TO SURVIVE

By

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BS in Forestry and Wildlife, Virginia Tech
1996

Presented in
partial fulfillment of the requirements for
the degree of Master of Arts in Liberal Studies
in Leadership

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Dedication

To Cousin Betty. Thanks for sharing your stories and providing inspiration and encouragement.

To my family. Thanks for your unwavering patience and support in this endeavor.

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Table of Contents

Abstract	1
Introduction	2
<i>The Sofia</i>	2
Early History	2
Hurricane Kendra	7
The Eruption of Soufrière Saint Vincent	9
Requisite Ship Maintenance	9
A New Captain	10
House Arrest	12
A Failing Keel	15
Half Baked Mutiny	17
<i>The Sinking of the Sofia</i>	20
The Final Voyage	20
Life Rafts, Day One	27
Life Rafts, Day Two	30
Life Rafts, Day Three	32
Life Rafts, Day Four	33
Life Rafts, Day Five	34
Life Rafts, Day Six	35
Rescue	36
<i>Examination of the Sofia’s Leadership</i>	41
<i>The Grafton</i>	42
<i>The Invercauld</i>	43
Adaptive Leadership Theory	46
Diagnosing the Challenge	47
Gap Between Espoused Values and Behavior	47
Competing Commitments	48
Speaking the Unspeakable	49
Work Avoidance	50
Diagnose the Political Landscape	51
Make Interpretations and Design Effective Interventions	53
Act Politically	55
Orchestrate the Conflict	56
Build an Adaptive Culture	58
Conclusion	59

Abstract

This is the historical account of the tall ship, or schooner, *Sofia* that sank on February 23, 1982, off the North Island of New Zealand, between Cape Reinga and North Cape. Of the 17 crew members on board, 16 of them made it into the life rafts. They were rescued by the Russian trawler *Vasili Perov* more than five days later. How the crew managed to survive in the life rafts is further examined through the Adaptive Leadership framework by Ronald Heifetz, Alexander Grashow, and Marty Linsky. Through this examination, the *Sofia's* survival leadership is compared and contrasted to the *Grafton* and *Invercauld*, shipwrecks that stranded survivors on New Zealand's Auckland Islands at the same time; each ship's survival group unaware of the other.

Introduction

From an early age, I have always been fascinated by survival stories, particularly those involving the ocean. Perhaps, I was influenced by my cousin's experience of sailing on a tall ship that ultimately sank off the coast of New Zealand, and plunged her, as well as 15 other survivors, into weeklong drift, in inflatable life rafts, on the roaring sea. I remember our family gathering around the television to watch the six o'clock news, hungry for more information and hoping to catch a glimpse of Cousin Betty. The year was 1982, and I was seven years old.

As I got older, my interest in what happened during survival situations shifted to how and why it happened. Were individuals in survival situations completely at the mercy of luck and fate? Or, were their decisions and actions impactful on their ability to survive and endure? Unfortunately, these answers will always be subjective, murky, and debatable. In spite of that, I have feebly attempted to document the history of the *Sofia*, and examine the leadership of its survivors using Heifetz's Adaptive Leadership model. This is the *Sofia's* story.

“We are Sofians. We are resilient...We are on a fine, proud tall ship south of the equator, and we really, really, really are paradise bound, at long, long, last.”

– Pamela Sisman Bitterman (2004, p.169).

Early History

In 1969, several weekend sailors and a few college kids from nearby Reed University in Portland Oregon decided to act on the dream of owning a tall sail ship and sailing it around the world. After searching worldwide for a suitable candidate, the group found an abandoned Baltic trader, beached in a wooden boat graveyard in Kalmar, Sweden. For \$7,000, the group, now 20

strong, was in possession of a 121 foot long three masted gaff-topsail schooner, built in 1921 (McBride, 1975). At its prime the ship could gross 100 tons; however, age and ocean beatings had taken its toll. It was no longer able to pass inspection to haul commercial freight; no surprise, since it was built out of pine, the general practice of the day. The new owners, however, considered the bargain too good to pass up. Immediately following its purchase, the owners quickly set about the arduous work to make it seaworthy once again. During the next twelve months, the interior of the ship was turned into the semblance of a living quarters. The old, deteriorating pine hull was patched and repaired. The vintage diesel engine that sat amidships was moved to the aft of the ship and patched into a marginal form of functionality. Additionally, a large forward gear locker was installed to store the vast amount of sails and rigging necessary for the operation. The heavy aft pilot house was removed, and a second anchor installed, while the amidships area was fitted with bunks, a galley, and a saloon (that would eventually include an old generator and ice machine for mixed drinks). Finally, to increase stability, 27 tons of concrete were poured into its bilge compartment for ballast. After deeming it seaworthy, the owners chugged through the Kiev Canal to Portsmouth England for new sails. Next, the resurrected Baltic trader spent nearly four months in Spain and Portugal for new masts, yards, and rigging. When all work had been completed, the proud owners christened it the *Sofia*, in honor of the Queen of Norway and Sweden.

Having received a crash course in wooden ship maintenance, the new owners quickly realized that the *Sofia*, already geriatric for a wooden vessel, would require constant upkeep, renewal, and refurbishing to keep it afloat. Accordingly, they created a charter that essentially formed a sailing cooperative, allowing anyone interested in sailing to buy a share of ownership in the ship; the money would then be used for any and all future upkeep. Thus a floating commune

was born. Anyone interested in becoming an owner paid a fee of \$12/day for close to one year. After completing the yearlong tour of duty, an individual became a vested owner and was no longer required to pay in order to remain on the ship. The idea was that after one year aboard, an individual would become an accomplished sailor, thus able to teach the craft to the next paying newcomer (Bennett, 1982). In return for their payment, deckhands would receive room and board, an education in sailing an old wooden ship, and a worldwide adventure.

Equally interesting as the *Sofia*'s resurrection, was its lack of modern amenities. There was no satellite navigation system, nor was there a LORAN (a long range navigational system used commercially since the 1950's until GPS replaced it in the 2000's). The ship was devoid of a depth sounder and autopilot which would have allowed the crew rest in good sailing weather. There was no WeatherFax on board to receive weather update facsimiles through high frequency (HF) radio waves. In fact, the *Sofia* did not even have its own anemometer for measuring wind speed. There were no electric winches or windlasses, requiring tremendous amounts manual labor to hoist sails and anchors alike; in fact, there was no electrical system at all minus the ice maker run by the frail, on board generator. There was no running water, and certainly no private bunks. Using the restroom required hanging oneself off the taffrail and doing your business for all to see that dared to look. Cooking was performed on an old stove powered by the same diesel fuel that ran the engine. And of course, there was no heat or air conditioning of any kind.

In addition to the lack of amenities, the *Sofia* also lacked the rigid maritime leadership hierarchy used by most vessels. In trying to create a truly cooperative leadership structure, the founding owners settled on a democratically chosen captain. Soon after, the *Sofia* added a first mate of the captain's choosing to the command. This second level of leadership proved

advantageous for the vast amount of manual labor required for sailing. A seniority system also developed over time for assigning the more critical responsibilities.

Culturally, the *Sofia* would never conform to any flavor of accepted social norm. The crew itself would prove to be as fascinating as the ship. Aside from the captain, the crew seemed to be quite transient often changing at every port. The crew's make-up was a multinational, multicultural, and multigenerational hodgepodge of anyone willing to sail on a ship that operated as a piece of floating history. Predictably, the *Sofia* became a ship of mismatched pieces that was welcomed into many ports with blind acceptance, and turned away by others for the very same reasons. Clothing, oftentimes, was optional, but generally expected when the ship was moored in port to discourage the attention of local authorities. Over time, the crew included young college aged sailors that romanticized the idea of sailing around the world, middle aged adults that were running from a broken home life, adults with alternative lifestyles that had not yet been accepted, and transients that just wanted to hitchhike from one island to another; but all were working crew members. In 2004, long time crew member Pamela Sisman Bitterman splendiferously captured the essence of life onboard the *Sofia*:

In all of her questionable affect and enterprise, *Sofia* remains the stuff of fantasy. Folks from every slice of society are drawn to her, and rarely does she disappoint. Our crew always has a wayward representative or two from the upper class who can hobnob with the hoi-poilloi. The remaining crew provide interesting company and often pure unadulterated entertainment. When you're aboard the *Sofia* the facades fall fast. The hair comes down. The uniforms come off. The inner child speaks out. It's gotta be a kick to be in our midst if most of your days are spent being prim and proper. The pervasive theme on board the *Sofia* is come as you are. No judgement will be delivered,

no obligation required. You don't have to buy into the ideology or sign on for the duration. You are free to refresh your spirit with a quick dip in our nonconforming medium. Those who do stay have chosen the wild side and walk that fine line between what intoxicates and what disturbs, what soothes and what scares the hell outta most people. It won't always be secure, but it's guaranteed to be challenging and life altering. Folks love just dabbling in our delicious lifestyle. They come in awe and often out of intense curiosity. And they usually conclude their visits with smiles, memories secreted away to savor later, decorum preserved, and impulses held vigorously in check (pp. 95-96).

Over time, the *Sofia* created quite a reputation for itself, and often generated the most buzz in whatever port it was tied up to. In Boston in the fall of 1978, while selling crafts gathered on its previous circumnavigation, the *Sofia* garnered so much attention that both *Us* and *Soundings* magazines wrote stories while it was anchored there. Boston's tourist ferries also included the *Sofia* on the same harbor tour that pointed out the USS Constitution, and no doubt embellished the *Sofia's* alternative lifestyle.

Boston was an odd port of call for the *Sofia*, although it provided fertile grounds to recruit paying deck hands and sell the crafts and trinkets collected from a recent circumnavigation, bolstering the operating fund. More importantly, perhaps, Boston offered protection to a wooden schooner during hurricane season. The restless crew, however, wanted to return to the Caribbean. There the crew could earn money using the *Sofia* to haul dry goods among the islands in return for cash payment; an appealing prospect since the Caribbean had less stringent regulations governing shipping. It also allowed the *Sofia* to be more self-sufficient, and afforded the *Sofia's* crew the ability to maintain their wooden ship's thriftless hull. Always in



Figure 1. Crew member fishing from the Sofia. Bitterman, P. (2011). Sailing to the Far Horizon.mp4. Retrieved from <https://www.youtube.com/watch?v=CPD4LEPi3Qs&feature=youtu.be>

need of constant maintenance, the inexpensive dry docks in the Caribbean were a bargain compared to most commercial ship yards. The Caribbean dry docks also allowed the crew to do most

of their own work, an economic godsend for a cash strapped crew. Finally, on October 25, 1978 the *Sofia* departed Boston for Martinique. Always the vagabond, the *Sofia* wandered, often naively, into natural disasters and geopolitical upheaval.

Hurricane Kendra

After a day's sail from Boston, however, the ship started to run into stormy weather. In fact, many of the veteran crew members had become worried. Upon departure, weather reports were calm, but now it seemed that the *Sofia* had unknowingly sailed into a developing storm. As the crew tried to get abreast of the situation, incoming weather reports warned of a dangerous, strengthening storm. New crew member Pamela Sisman Bitterman, who signed on as a paying crewmember in Boston, quickly gave up any hope of her maiden voyage "... magically transforming into the idyll that we naively envisioned" (2004, p. 38). As the developing storm

grew into a potentially deadly one, the U.S. Coast Guard grimly communicated that evasive action was necessary to save the *Sofia* and crew. For starters, the *Sofia* adjusted course to avoid the storm; however, the storm's rapid strengthening rendered that option ineffective. In a span of 24 hours, the storm grew from a tropical depression to a category one hurricane, named Kendra (Lawrence, 1979). Simple evasive maneuvers had now turned into a life or death situation. As the crew contemplated escape routes, they actively sought the U.S. Coast Guard's recommendations. The situation's gravity was never clearer than when the Coast Guard requested the *Sofia*'s last known position and list of crew members complete with next of kin. As radio contact was lost, the *Sofia* rerouted for Bermuda, in effort to outrun the storm. Even with the sails furled due to high winds, the ship made 8 knots on nothing more than wooden posts. With a little luck, the high winds pushed the ship along, and eventually out of harm's way. The high seas, however, handed the ship a battering and caused it to take on quite a bit of water. In fact, the storm opened leaks in the hull bad enough for sea grass to enter through the cracks. Already in need of scheduled maintenance, the storm pushed the boundaries of what the ship could withstand. At one point during the storm, the bobstay, a chain that runs from the stern of the ship to the tip of the bowsprit, broke loose, causing all of the rigging to sag. The captain, identified only as Skipper Tom by those onboard, made the dangerous repair himself by hanging over the side of the ship during the gale, supported by four year veteran and First Mate, Evan Logan. Many days later, the storm beaten ship would triumphantly limp into port at Bermuda. There, the crew addressed the ship's injuries with as many bandages as possible. After its most urgent needs were addressed, the *Sofia* proceeded to Martinique for a full repair, or at least what the Sofians consider a full repair (Bitterman, 2004, pp. 38-46).

The Eruption of Soufrière Saint Vincent

After celebrating Thanksgiving 1978 aboard the *Sofia*, the crew arrived in Martinique a few days later. Unfortunately, the dry docks were full. In an effort to find a suitable substitute, the crew sailed to Bequia, Saint Vincent, Lesser Antilles. During the wait in Bequia, the crew took the time to re-caulk and varnish the deck. As the crew put the finishing touches on the deck repairs, the *Sofia* would be besieged by another natural disaster. On Friday, April 13th, 1979, the volcano Soufriere, in Saint Vincent, erupted, spreading ash for 100 square miles. In an instant, the *Sofia* transformed into the "...voice of the West Indies...the base of operations...receiving data, disseminating news, organizing rescue and evacuation teams" (Bitterman, 2004, p. 98). Dick LaRoche, U.S. Consul General to the West Indies, was aboard the *Sofia* to bid the crew farewell when the eruption occurred. Mr. LaRoche had become friends with the crew while the ship was docked there, and for the next week, Mr. LaRoche would relay communications through the ship's modest, but stand-alone radio system. Luckily no one was killed in the blast, but least 20,000 people had to evacuate, and the northern third of the island had been effectively cut off from the rest of the country (DeYoung, 1979). For nearly a week, the crew of the *Sofia* offered help as best they could, while they simultaneously cleaned the ash from the decks and rigging; when the brunt of the crisis had passed, the restless ship sailed out of port.

Requisite Ship Maintenance

After searching for nearly a month, the *Sofia* found itself docked in the Barbados, but the prospect of getting hauled out on dry dock for maintenance had not materialized. Unfazed, the crew resorted to impromptu Sofian ingenuity. Skipper Tom and First Mate Evan concocted a plan to lay the *Sofia* over on her side. They used the *Sofia*'s larger shore boat, named the *Salty*

Dog, and rigged it to the opposite yard (cross member on the mast) of the side needing work. A rope was also attached from the main mast to an anchor point inland to steady the ship. Then, the crew flooded the *Salty Dog*, which caused the *Sofia* to lean onto her side. The slack was then pulled out of the rope that was anchored to shore. This exposed the area of the upper hull that needed work, and facilitated the repair. When one side was completed, the procedure was repeated again on the other. While unusual and unprecedented, it allowed the crew to perform partial hull repairs while waiting in line for a dry dock to finish the lower hull. The *Sofians'* antics became such a spectacle that many local people came to watch the entire operation, purely for entertainment. Furthermore, it created such a draw for the docks that the *Sofia* was never charged a dockage fee (Bitterman, 2004, pp. 87-88). However, the monotony of trying to repair an aging vessel became the catalyst for a change in leadership and significant crew turnover.

A New Captain

Everyone understood that the *Sofia's* charter lent itself to a high crew turnover. Certainly there were more than a few people who wanted to become resident crew, not only through the ownership fee, but through the required 12 months of service; but there were also "...a lot of short-term people just going from A to B, with no intention of becoming resident crew" (Stade, 1982). Crew turnover was especially high when ship maintenance required months of haul out and tremendous amounts of manual labor. This time, however, the *Sofia's* Captain was the casualty. Skipper Tom, who had safely led the *Sofia* through a couple of natural disasters, had accepted a more lucrative offer to captain another ship. Under the cooperative, the *Sofia's* crew needed to vote for its next captain. With little competition, First Mate Evan Logan was voted in. In fact, Evan had been in the running for captain when Skipper Tom was elected. Arguably, Evan was the better sailor, methodical and unemotional in his decision making. However, his



Figure 2. The Sofia in 1975. Adapted from "Ocean Travel, A Life of Self Sufficiency," by L. McBride. 1975, Mother Earth News, May/June Retrieved from <https://www.motherearthnews.com/nature-and-environment/ocean-travel-self-sufficiency-zmaz75mjzgoe>

unyielding loyalty to the ship had rubbed several experienced veterans the wrong way, refusing to cater to a few egotistical individuals that valued themselves more than other crew members. "Evan's seamanship can hardly be questioned..." remembered Pamela Sisman Bitterman (2004, p. 81). In time, Evan proved to be more than competent, but his immediate task was to finish the *Sofia's* repairs.

In Barbados, West Indies, Captain Evan discovered an old boatyard that the *Sofia* could utilize. After a short 14 day wait,

the remaining crew of the *Sofia* proceeded to work around the clock for more than a week to "salve her wounds, close her lesions, refortify her constitution, make her whole again"

(Bitterman, 2004, p.91). With the repairs complete, the *Sofia* could finally move forward with more serious preparations for continued sailing. Captain Evan's next order of business was refueling their ship. In late summer, 1979, the 1000 gallon fuel tank that fueled the small auxiliary diesel engine was by all accounts dangerously close to empty. Luckily for the *Sofia*, inexpensive fuel was just another sailing adventure away, this time in Venezuela. In fact, #2 diesel fuel was selling for 13 cents/gallon in Puerto La Cruz (Bitterman, 2004, p. 107). Comparatively, The Washington Post ran an article about Metropolitan Fuel Co.'s ability to provide inexpensive heating oil (the same #2 diesel fuel used to power the *Sofia*) in Washington D.C. for 82.9 cents/gallon (Explaining the High Cost of Heating Oil, 1979). For a cost conscience sailing commune, it was an answered prayer. Local authorities in Venezuela, however, would get the last laugh. In an odd gesture, the *Sofia* was never allowed to approach the fuel docks. Instead, the ship is required to drop anchor in a congested commercial basin just off Puerto La Cruz's industrial center. The authorities surprisingly, however, gave permission for the *Salty Dog* to approach the fuel docks and transport a single 55 gallon barrel of fuel at a time back to the *Sofia*. This was a risky procedure to say the least. In all, it took three days to fill the *Sofia's* fuel tank. After a lengthy stop in Costa Rica to resupply, the *Sofia* would make its way into the Panama Canal Zone, arriving in January, 1980.

House Arrest

A major port, the Panama Canal is heavily utilized by global travelers. As the *Sofia* dropped anchor, waiting for its turn to go through the canal, most of the crew goes ashore to indulge in the luxuries of city life. The Panamanian National Guard, however, believed that the *Sofia* has entered port without permission. One by one, the crew of the *Sofia* is rounded up and jailed in Panama City. At the same time, a small boat of five Panama National Guardsmen

approached the *Sofia*'s remaining skeleton crew, and placed everyone under arrest. Unwilling to impound the *Sofia*, the Panamanians allow a couple of the crew to remain on board, under house



Figure 3. Parker, B.M. (1982) Photo of *Sofia* from the bowsprit.

arrest, but confiscated their passports.

That night, under the cover of darkness, Pamela Sisman Bitterman stealthily rowed ashore in the *Sofia*'s small wooden dingy, the *Jonah*. There she finds a couple of crew members that eluded arrest, hiding in the bushes. Pamela also found a United States service member that confirmed that the *Sofia*'s crew had, in fact, been jailed. The service member then directed her to the U.S. Embassy for help. On the morning of January 19, 1980, Pamela contacted the Embassy

and explained the *Sofia*'s predicament. Later that evening, the jailed crewmembers of the *Sofia* were set free, 24 hours after they had been arrested; no doubt aided by the U.S. Embassy. It turned out that the *Sofia* had been mistakenly caught up in the politic upheaval surrounding the return of the Canal back to Panama. Even though the crew had contacted the American authorities for permission to enter into the Panama Canal Zone, the Panamanians took exception to it, and decided to arrest the crew for unauthorized entry and trespassing. The joint commission created to govern the Canal during the transition period apparently "...delineated the

division down the center of a chart using a black marker pen” to separate the Panamanian and American controlled areas (Bitterman, 2004, p. 164). The *Sofia*, in all of its naivety, was anchored directly on top of that imaginary black line, creating an opportunity for Panama to challenge U.S. authority. With passports returned and all crew members back on board, the *Sofia* made its way through the Panama Canal.

After exiting the Canal, the crew whimsically decided to make a brief stop at the Galapagos Islands. Controlled by the Ecuadorian government, the Galapagos were notorious for corrupt Ecuadorian officials who often tried to take advantage of passing tourists. Just weeks earlier, the crew of the *Sofia* had heard rumors of a private yacht that was forced to pay an enormous fine for spurious charges brought against them, as well as being threatened with imprisonment. With a short memory, and undeterred by their stay in a Panamanian jail, the *Sofia* ambled right on over to the Galapagos, rumors or not.

Sure enough, the Ecuadorian authorities approached the *Sofia* as soon as it enters the port. As they boarded the ship, the *Sofia*'s crew had laid out a table below deck with goodies on it, not necessarily for bribes, but more as a peace offering. There was food, alcohol, and a variety of magazines including Playboy. This tactic worked great in the Caribbean, allowing those that boarded and searched the ship to take as they pleased from the table. The Ecuadorians, however, were not amused. Initially, the Crew of the *Sofia* was charged with flying the ship's flag over top of the Ecuadorian flag as they entered the harbor. The *Sofia* was in fact guilty of this, but when the situation was brought to the crew's attention, it was quickly corrected. For this offense, the Ecuadorian government fined the *Sofia* \$12,000, confiscated everyone's passports, and placed the entire crew under strict house arrest. In an effort to alleviate the tense situation the *Sofia* offered up a humble deference to the Ecuadorian's jurisdiction in this matter and a very

heartfelt apology. The Ecuadorians never responded. Next, the *Sofia*'s crew assured the Ecuadorians that they "...barely had two nickels to rub together....but they aren't buying it" (Bitterman, 2004, p. 168). Finally, in a last ditch effort, the crew offered to bake them some pies, and challenged them to a game of beach volleyball – double or nothing. "It's all the same to us," recalled Pam Sisman Bitterman in 2004, "as nothing is what we've got, although we do have some damn fine volleyball ringers" (p. 168). The Ecuadorians bristled. For a week, the crew was confined to their ship in the tropical heat, not even allowed to cool off by jumping in the water below. During that same week, the Ecuadorians came to the realization that the *Sofia* indeed had no financial ability to pay the fines, so they began to negotiate. After deliberation, the Ecuadorian government dropped the \$12,000. In exchange, however, all female crew members would be required to accompany several local officials to a fancy-dress ball onshore. If the requirement was met, then the entire crew of the *Sofia* would be allowed a shore pass for 24 hours, after which they would be required to leave the country. "The Party is actually a gas. The officers are perfect gentlemen, and the day ashore is interesting, to say the least," (Bitterman, 2004, p. 168).

A Failing Keel

After leaving the Galapagos, the *Sofia* traversed the most desolate part of the ocean for five weeks. Stops were made in the Societies, The Cook Islands, the Samoas, and the Kingdom of Tonga before crossing the doldrums, a region between Tonga and New Zealand that is known for light fluctuating winds -- a purgatory of sorts for ships requiring wind for sailing. The 1,500 mile journey through the doldrums took 28 days, with an average speed of barely two miles per hour. During the four week monotony of waiting for breezes, a few of the crew noticed a large hog, or bend, in the ship's keel, the size of which was particularly menacing. The backbone of a

wooden ship, the keel was clearly failing; 18 inches lower on each end of the ship than it was in the middle. No doubt, mileage and age contributed to the deterioration; but rearranging its interior compartments during its rebirth was also to blame. Originally the ship's engine sat near the center of the ship, but it was shifted to the aft in order to make room for the galley, saloon, and bunk space when the Oregon group refurbished it. These actions unknowingly caused the *Sofia* to ride disproportionately heavy in its bow and stern. For Captain Evan Logan, the situation created a sense of urgency. A hog of that magnitude, left unchecked, was a death sentence.

The *Sofia* arrived in Nelson, New Zealand on February 13, 1981. This time it was apparent that the ship would be docked for the long haul. As was often the case, there was a handful of faithful crew that remained with the ship, while the more transient members came and went. Confronted with the reality that the repair may take a year to complete, a large crew turnover was inevitable. Understanding the limitations of his funding, Captain Evan "...assembled a congregation of sailors, wooden boat aficionados, shipwrights, and marine



Figure 4. *Sofia's* false keel installation project. Bitterman, Pamela (2004) *Sailing to the Far Horizon: The Restless Journey and Tragic Sinking of a Tall Ship*, picture. From Pamela Bitterman (pg. 292), 2004, Madison, Wisconsin: University of Wisconsin Press.

architects. Each evening we gather in the saloon the hash out how to fix our failing hull” (Bitterman, 2004, p. 277). When the idea of rebuilding the entire vessel from the waterline down became cost prohibitive, the consensus solution for the repair involved reinforcing the damaged areas. Instead of tearing out the old keel for repairs, a new false keel was made from laminate wood, and a steel shoe was specifically designed to fit into the hog of the old keel. Scuba Divers would lay a cradle underneath the ship, which would be used to hoist it out of the water. Then, the *Sofia* would be gradually set on top of the new false keel, attached with 6 foot screws from the bilges down through the original keel, and anchoring itself in the new false keel. In total, the ship was in dockage for repairs more than 12 months (Sailing ship spruced up, 1981).

A Half Baked Mutiny

After the lengthy repair, the *Sofia* proceeded to test the newly installed false keel with a series of trials. The first one entailed three days of hard sailing in Tasman Bay, near Nelson, New Zealand, and a subsequent haul out to inspect how the repair held up. Captain Evan then decided that a longer two week working of the vessel is necessary, along with another haul out, before declaring it sea worthy. Unfortunately, some of the more experienced Sofians were not in agreement with his thinking. In fact, they want to set sail immediately for Australia. The crew had just learned of, and quickly accepted an offer for the *Sofia* to appear in a movie about the local pirate Bully Hayes (Sofia, 1982). Aside from pay, Phillips Whitehouse Productions Ltd. offered to refit the *Sofia* with a brand new diesel engine, including additional structural repairs, to ensure that the *Sofia* operates smoothly during filming. Stranded ashore for a year, several disgruntled crew members want to hastily sail for Australia to partake in their new lucrative endeavor. Captain Evan, on the other hand, recognized that the *Sofia* was untested, and needed more sea trials after the risky repair.

A group of four Sofians, led by the last original founder still onboard, decided to press the issue. If Captain Evan wouldn't immediately set sail for Australia, they would force a new vote for captain, and hopefully elect the remaining original member, Norman. As the four lobbied, they persuaded one of the new sailors to join their group, bringing their total to five in all. Quickly factions formed, with the rest of the crew supporting Evan. Within a week, the five dissidents realized the votes were not there and disbanded entirely from the ship. "In truth, the Gang has taken a stand on shaky principles" recalled Pamela Sisman Bitterman. "Evan based his decisions on research, meticulous calculations, and the time-worm tradition of consulting books, charts, and the esteemed opinions of other sailors" (2004, pp. 287, 293). The dust up between the crew members exposed the conundrum afoot the *Sofia*: how to lead a group of sailors, all possessing equal ownership, with minimal chain of command. With the onshore, half-baked mutiny averted, Captain Evan resumed his trial runs of the *Sofia*, testing her hull and inspecting it once again before preparing to embark for Auckland, New Zealand.

In the wake of the upheaval, several other Sofians, not involved in the uprising, also decided to leave the ship to seek out other adventures. (One of the departing Sofians was Tami Ashcraft, the inspiration for the movie *Adrift*). Chris Janinni, the new sailor that had been persuaded to join dissidents, was forgiven and welcomed back onboard the *Sofia*. Unfortunately, this left only four senior crew members on board with any experience sailing the *Sofia*: Captain Evan Logan, Pamela Sisman Bitterman, Bill Yost, and Joe Bitterman. Wayne Yearbury, known as Byrds, had been a crew member on the *Sofia* since the repairs began, but had little experience at sea. Nigel, an Englishman with some sailing experience, is added to the crew. The rest of the crew is rounded out with locals that mostly befriended the crew during the yearlong haul out in Nelson. Betty Mason Parker signed on for a couple of weeks, while her cousin Mark Lutterman

signed up for a full tour aboard the *Sofia*. Trevor Cousins and Rodney Straight had been hanging out during the repairs and signed on. Scott Reed (Little Scott) signs on and was a friend of Bill Yost. Canadian Scott Fotheringham (Big Scott), Bart Williams, Mary Gallagher, Imogene Coxhead, and a female named Gladys sign up as well. Varmit, the ship's mascot, was now the most senior Sofian. A coati-mundi, Varmit was smuggled on board in a crate of bananas, 8 years ago in the South Caribbean. He also possesses a cantankerous attitude, often attacking the feet of crew members. The large turnover also necessitated that a new first mate be chosen, and Captain Evan Logan promoted Pamela Sisman Bitterman to fill the position. Additionally, the other two experienced *Sofia* crew members were asked to increase their responsibilities as well.

Finally, the *Sofia* departs Nelson for Auckland, by way of New Plymouth. Captain Evan had decided to take the North About route, as local fishermen call it, to Auckland. This entailed sailing up the west coast of the North Island of New Zealand, around the northern tip, and back down the east side to Auckland. While longer than sailing through the Cook Strait, and up the east coast, it avoids the prevailing cross winds that would constantly push the sailing vessel into a lee shore. With a green crew, Captain Evan determined this to be the safest route. It also gave the new crew members a taste of sailing, taking almost three days to travel to New Plymouth. Not surprisingly, the Captain and First Mate get very little sleep, as they are needed on hand to teach and show the overwhelmed rookies how to sail. The stopover at New Plymouth provided a much needed rest for the veterans, while allowing Gladys to disembark. In her place, a local waitress, 20 year old Julie Osborne, decided to sign on, seeking a ride to Auckland. First Mate Pamela took advantage of the stop and set up the watch rotation for the crew of 17. Each watch consisted of one experienced Sofian along with three new crew members, with each watch lasting three hours long.

After a two day delay in New Plymouth due to weather, the crew finally departed for Auckland. Upon their departure, however, a wisp of clouds was seen on top of, and blowing away from, Mount Taranaki. This phenomenon was often viewed as an indicator of foul weather by local fisherman in New Plymouth. A quick check of the pilot charts reassured the Captain and First Mate that summer in the waters around the North Island bring “winds of variable nature,” and in the fall bring “more frequent and violent storms” (Bitterman, 2004, p.301). February was very much summertime in New Zealand, and the Captain and First Mate decided to set sail; and even though the water was quite choppy, it did not appear out of the ordinary.

The Final Voyage

On the morning of February 21, 1982 the *Sofia* weighed anchor and departed for Auckland. After the first day of sailing, the water became rough enough to alarm several of the new crew members; and while not conducive for teaching, the weather was not particularly alarming for the four experienced Sofians aboard. By late afternoon, on February 22, the *Sofia* had reached Cape Maria Van Diemen, the North Island’s north western point. As night fell, however, conditions worsened. The crew also noticed that the ship was taking on water, but so far the bilge pumps were keeping up with the inflow. Several crew members noticed a small vessel anchored in an inlet and suggested that perhaps the *Sofia* should do likewise. Captain Evan decided to check the weather band radio again, even though the last weather report contained no threat of severe weather. However, when he flipped the switch, the radio does not come on. He toggled the switch back and forth, jiggled wires and knobs, but still nothing. As the Captain reached behind the control panel to troubleshoot the problem, he pulled out a tangled, chewed handful of wires. For some reason, Varmit had attacked the electrical wires of the control panel. Another crew member had reported seeing Varmit in the control room,

agitated and in a fury. Varnit had left the *Sofia* without the ability to communicate effectively. Captain Evan then tried to contact the boat moored in the cove with the only functioning piece of equipment left, the old VHF radio. The boat responds with “This is the Weather off the North Cape, dontcha know” (Bitterman, 2004, p. 302). The boat also informed the *Sofia* that they had not heard of any change in the weather or of an imminent storm. Throughout the day, the winds were a sustained seven to ten knots (Schooner crew cheer rescuers, 1982). Captain Evan then decided that anchoring in a small inlet during potentially high seas provided its own challenges, never mind that the anchoring procedure itself would be lengthy and exhausting; but the final deciding factor would be the ocean currents. At the time, the current was pushing the *Sofia* north into the wind. Captain Evan predicted that in three or four hours the current would make a 180 degree change and push south, in conjunction with the wind. That would make for impossible sailing and stress the ship’s lightly tested false keel. Per Captain Evan’s calculations, he hoped to round the point in order to gain some protection from the weather by dawn.

That evening, First Mate Pamela Sisman Bitterman and her team took watch from 6:00 pm to 9:00 pm. During the watch, the last lights from Cape Maria Van Diemien faded into the darkness. The *Sofia*’s course had altered slightly, which necessitated a beating (zig zagging) into the headwind. This caused the ship to heel (lean over) as the wind pushed on the sails, normal for the conditions. However, every time the ship heels, the new bilge pump, installed during the year long haul out, loses its prime. This was alarming for an old wooden vessel in rough seas, especially since the ship relied heavily on that particular pump to jettison most of the incoming water. First Mate Pamela directs her watch crew to work the manual pumps. While effective, the manual pumps needed to be worked continuously without stopping. At 9:00 pm, Captain Evan is informed of the developments, as well as Joe Bitterman, the experienced Sofian

starting the 9:00 pm to 12:00 am watch. First Mate Pamela stayed on an additional two hours, to about 11:00 pm, to ensure the manual pumps were being utilized and working properly.

However, anytime the crew slowed down, the bilges began to fill.

At 12:00 am, Byrds took the helm of the next three hour watch. He expressed to Joe that the bilge pumps must not be working. Joe then conveyed the seriousness of the situation and assured him that the pumps were indeed functioning, but that the ship's hull was laboring hard, and taking on a lot of water. He also conveyed to Byrds that it was imperative that the manual pumps be worked continuously. Sometime around 1:00 am, First Mate Pamela returns on deck to check on the ship and crew. What she saw alarmed her. Rookie crew member (Big) Scott Fotheringham was at the helm, white knuckled, and had completely lost his heading. The other two rookies are on deck as well, but only as bystanders. For some reason, Byrds mistakenly diagnosed the manual pumps with faulty diaphragms for a second time, and decided to repair them, ordering the rookies on deck to man the helm. This left no one to operate the manual pumps. Immediately, First Mate Pamela summoned Captain Evan on deck. When the Captain arrived, he began barking orders. He ordered Byrds to drop what he is doing and get a small portable gasoline powered back up pump running in order to lower the water, now in the ship's hold. First Mate Pamela is directed to summon all hands on deck in order to reduce sail, "Now!" (Bitterman, 2004, p. 305). The First Mate then went below and whistled loudly to wake the crew. "The First Mate came below and ordered all hands on deck. It was pitch dark, but I could see everything, just like there was a full moon out; but there wasn't. We were in the middle of a terrible storm," recalled Betty Mason Parker. Sensing the urgency, the crew members reported on deck in various states of dress (or undress). At this point, the weather is so foul that it took great effort to stay upright on deck, as the storm had grown into a force eight gale (39 – 46

knots) with 20 foot seas. Captain Evan ordered a change in heading to run “before the weather in order to ease the strain on the hull” (Sofia, 1982). Big Scott, still at the helm, had continuously complained that he could not see the compass. The Captain shouted, “Prepare to furl the main,” and ordered First Mate Pamela to “get a torch (flashlight) for the helm” (Bitterman, 2004, p. 305). It takes almost everyone’s help just to furl the mizzen in these conditions, and as the ship filled with water it began to feel heavy and lethargic. When the First Mate went down to find the torch, she was startled at the amount of water below deck. She noticed that the main batteries were partly submerged, and the diesel engine’s starter battery was completely immersed, rendering it useless. “At this stage...the crew had taken down 60% of the sail to ease her and reduce speed,” (Stade, 1982).

Byrds had been unable to start the portable gasoline pump this whole time, and Captain Evan went over to assist. Through it all, Mary had pumped nonstop on the big manual pump since being summoned, trying to make some headway to no avail. Mary also questioned aloud why the ship was heeling over so far. Tragically, the ship was not heeling, but “listing heavily at the time,” (Tragic end to Sofia dream, 1982). There was just too much water below for the ship to function properly at this point. Captain Evan confirmed this when he ordered the release of the forward life raft. As First Mate Pamela and Joey began to release the life raft, the ship emitted “a loud deep cracking noise below decks,” (Official concern at Sofia’s sinking, 1982). The crew paused for a moment to absorb the significance of the *Sofia*’s deep moan. Captain Evan, however, kept the crew on task as he frantically pointed to the forward life raft. As it was being released, “a big wave crashed over the bow and broke one of the new life rafts loose. I was just moving to secure it when the second hit us,” recalled Captain Evan Logan (Curiosity Saves 16, 1982). Bill Yost also recalled the moment:

They were still trying to bring her around when a big greenie came over the bow. There was water all over the deck and in the hold. The deck came up out of the water but because of the water in the hold, she couldn't right herself and when another big wave came over, the crew left the pumps, unleashed the lifeboats, and got onto the deck rail and pulled other members to safety. The *Sofia* rose up to an almost 90 degree angle and slowly went down, straightening up as she went down. Everyone sitting on the rail was washed off and probably were sucked down (Stade, 1982).

As the second wave crashed over the ship, the First Mate was swept off her feet and completely immersed in sea water. Fortunately she was holding onto a halyard that prevented her from being washed overboard and allowed her to catch her breath. She clamored up onto the side of the hull for just a moment with Bill and several others before they jumped into the sea. Captain Evan Logan said, "When I came up, my first reaction was to get a breath of air. The ship was on her beam ends and the masts were in the water," (Curiosity Saves 16, 1982). "She then came upright with only her masts out of the water. Then she lay over again before disappearing, her mizzen mast almost hitting me. The whole ordeal took less than three minutes," (Tragic end to Sofia dream, 1982).

At 1:30 am on the morning of February 23, 1982 the *Sofia* foundered and went down in 800 fathoms of water, twenty miles off the North Cape. "I can remember thinking this is it and we went down. Then I was shining a torch about in the water, looking for my crew," recalled the Captain (N.Z. girl lost, five-day ordeal for 16 after waves sink schooner, 1982). There was also an emergency locator beacon on board the ship, but the crew was unable to retrieve it. With only 30 seconds between the first and second waves to hit the ship, "there wasn't time" (Schooner crew cheer rescuers, 1982).

In an instant, all aboard the *Sofia* were washed into the sea, struggling to keep their head above water in the raging storm.

Bill said that as the lifeboats surfaced, the Captain jumped into one and grabbed the other. It was lucky that he did this, because the wind blew them a long way and if they hadn't held onto each lifeboat they definitely would have become separated... When I surfaced, I thought I was under the sail, and it turned out to be right underneath the lifeboat... I was pulled aboard by 'the smallest guy on the crew. (Stade, 1982).

Betty Mason Parker added that "when I went in the water, I was caught up in the suction of the ship a little bit as it sank. When I came up, I could see the life raft. I was the last one to get into our raft." Captain Evan, on his knees in the life raft, waved his torch that he had clung to during the sinking. He shined the light in broad circles for all still in the water to see. First Mate Pamela remembered that "Evan's torch, bleak and only intermittently visible above the swells, offer(ed) me my only direction," (Bitterman, 2004, p. 310). When she got into the second, larger life raft, she was the last one to get out of the sea. In an incredible stroke of luck, all but one of the crew had surfaced within 18 meters of each other. Captain Evan immediately ordered a head count, to which the crew responded with a count of 16. "Count again!" he demands (Bitterman, 2004, p. 310). Once again, 16 is the answer. Someone was missing. It was Julie. Twenty year old Julie Osborne, who had only been on board the *Sofia* for 5 days, was nowhere to be found. Stunned, the surviving crew relentlessly cried out for Julie. "We were up by the main mast – the waves just kept coming and coming. Julie screamed out: 'What shall I do?' I told her 'Climb the windward rail,' but we couldn't because the boat was on too much of an angle. The waves kept on coming – that was the last I saw of her," said Little Scott (Bennett, 1982).

As the survivors in the life rafts continue to call Julie's name in the storm, Captain Evan resumes his command. He emphasized the importance of holding the rafts together, letting everyone know that it was imperative for survival. For the rest of the first night, several male crew members held the life rafts together with their arms, a daunting task given the weather. With the life rafts more or less connected by human arms, Captain Evan sets up a transitory watch to call out for Julie, collect flotsam, bail the life rafts, monitor the conditions of the life rafts, and look for ships. To prevent dehydration, he encouraged everyone to hold back from vomiting, even though the survivors are riddled with a combination of seasickness and nerves.

Fortunately, both of the life rafts that were installed in New Zealand during the false keel repair functioned properly, and as designed, inflated at a predetermined depth of water. The one that was washed overboard was inflated and in good condition, designed for 10 people. The second one, designed for 13 people, went down with the ship but inflated and rose back to the surface. It was damaged; presumably as it ascended through the ship's rigging to the surface, with a gash in the floor and a hole in one of the inflation rings. As is customary maritime tradition, the Captain was in one life raft, while the First Mate was in the other. "We in the broken raft are totally exposed to the storm – wet, cold, bailing nonstop, pushing water over the sides in armfuls. And we are ridiculously unstable. Each wave that doesn't engulf us threatens to flip us," recalled First Mate Pamela Sisman Bitterman, (2004, p. 311). The life rafts were double floatation, which meant there were two rings that blew up around the raft. "If it hadn't blown up at all, Bill thought that probably half of the crew would have been lost," (Stade, 1982). Unfortunately, the *Salty Dog* and the *Jonah*, the wooden shore boats on the *Sofia*, were unable to clear the ship as it went down. The inflatable life rafts were their only option for survival.

Life Raft, Day 1

When dawn arrives on the first day in the life rafts, an exhausted group of survivors began to assess the situation at hand. “We take stock and decide to be proactive survivors. We will shake it off, suck it up, do whatever has to be done,” (Bitterman, 2004, p. 312). Everyone is cold, wet, and exhausted. The men that held the rafts together the first night are particularly depleted. “Their arms were bloody and raw from the ordeal,” recalled Betty Mason Parker. Those in the damaged raft came to the swift realization that their vessel, while still damaged, was not as unstable as first thought. It turned out that the survivors had ridden out the previous night’s storm in an upside down raft. To remedy this, the survivors jumped into the sea, flipped the raft, and climbed back on board again.

It was also decided that repairs should be attempted on the damaged raft. In order to do so, however, the raft had to be dry and the patch allowed 30 minutes to cure. This became a monumental if not dangerous undertaking. “The crew had to repair their leak by putting the people in the water and supporting the lifeboat on the other one, in order to keep it dry,” (Stade, 1982). Once again, the crew in the damaged raft was relegated to treading water for an extended period of time. After the glue had dried, the raft was relaunched and everyone climbed back on board once again. While not as stable as the undamaged raft, repairing the damaged one provided some security and comfort to those in it.

After repairing the life raft, Captain Evan ordered that the two life rafts be lashed together. This was done by using three lines. One line was used to tie the life rafts together. The other two were held at each end by someone on each raft. This further reduced the risk of the rafts separating, and prevented unnecessary strain on the life rafts themselves. Bill Yost later

recalled that tying the ropes could do one of two things. “It could pull out at the point you lash it to, or it could pull out at the point you lash it to plus take a piece of the raft,” (Stade, 1982).

Each raft also had a small wooden paddle and a canopy; however the damaged raft was missing the support system needed to erect the canopy. The survivors improvised by using the wooden paddle as a tent pole, in order to prop up their canopy, which provided valuable protection from the elements. In an effort to assess all items available for survival purposes, Captain Evan took inventory of everything on board. The items included: food and water stores, a manual foot pump, medical packet, life raft patch kit, signal mirror, three signal flares, and a fishing hook complete with fishing line. The accompanying life raft instructions, however, prove to be useless since no one on board can read Japanese. “They prove good for toilet paper, though,” (Bitterman, 2004, p. 312).

The Captain also had in his possession the weak but functional torch that had been used to signal survivors in the sea, after the ship went down. Unfortunately, the damaged life raft was missing the built in survival stores, most likely lost when the raft was damaged. However, on watch the previous night, Mary retrieved a sealed white plastic bucket floating near the life raft during the storm. When opened, it was found to contain water, survival food, and three more flares. Turns out, it was one of the homemade survival packs that the crew had made and stored in the *Salty Dog*. Somehow during the storm, it had worked free from its storage compartment and floated up near the life rafts.

For the most part, the undamaged ten person raft held Evan, Nigel, Bart, Mary, Betty, Trevor, and Big Scott. The damaged thirteen person raft held Pamela, Joey, Byrds, Billy, Little Scott, Imogene, Mark, Chris, and Rodney, but this was subject to change at any time. Often

temporary switches between rafts occurred for medical attention, comfort (such as stretching legs), sharing information, and decision making. The survivors also redistributed clothing as much as possible. When the *Sofia* went down, everyone was in various states of dress. Now in the life raft, those with more clothing share with those that have very little. “One of the survivors...escaped wearing only his underpants,” (Sofia rescuer tells of hysterical cries, 1982). The watch members when the *Sofia* went down were more fully clothed. Accordingly, they shared items such as an oilskin, t-shirt, or pancho with those that did not have time to dress themselves. Byrds, who was on watch when the *Sofia* went down, had on rubber boots. Somehow he managed to swim with them on and got into the life raft with his boots intact. Each raft was then allocated one of the boots, which proved to be invaluable for bailing water, vomiting in, or eliminating human waste.

“Evan remains clearly in command. This is never an issue. He maintains order and dictates function, thus giving us blessed purpose,” (Bitterman, 2004, p. 313). He sets up a more orderly watch. Whoever was on duty held the signal mirror. Joey was assigned the task of medic and given the small pouch of medical supplies. Captain Evan took control of the food and water stores. After initial calculations, it is decided that the crew has enough food and water to feed 10 people for three days. “The Captain decided that we wouldn’t eat or drink anything for the first two days. That would stretch our rations further, and also allow us to shrink down a bit since we were so cramped on the life rafts,” recalled Betty Mason Parker. “We rationed it to last for 16 people for two weeks. We figured by that time if we had not been found they would start to search for us,” recalled Captain Evan Logan (N.Z. girl lost, five-day ordeal for 16 after waves sink schooner, 1982). Sometime during first day, a survivor sees an airplane and takes it upon

himself to shoot off a flare, even though the chances of being seen were slim to none. Captain Evan then commandeers the five remaining signal devices.

The survivors battle constant wind and rough seas. Average water temperatures in the area where they went down off the North Cape are in the mid 60 degree Fahrenheit range in February. As mild as these conditions seem, hypothermia can start in as little as 30 – 40 minutes in water temperatures between 60 – 70 degrees Fahrenheit. Expected survival time under those same conditions is between 2 – 40 hours (Monahan, n.d.). As nightfall approaches, the survivors brace for another long, cool, and cramped night.

Life Raft, Day 2

On the second day, the crew begins to feel the effects of how cramped the life rafts are. “We had to sit like this,” recalled Betty Mason Parker as she drew her knees towards her chest. “You couldn’t even stretch your legs out without them being in someone’s face. Night time was the worst because you couldn’t get comfortable.” Trevor Cozens also remembered that the life rafts were “just a melee of arms and legs. We had turns at stretching out...but most of the time we just had to squat. We were all uncomfortable and at times, that got to some of us,” (Lomas, 1982). The watches and tasks that the Captain had assigned were upheld dutifully. Later, the crew began to talk more and try to make sense of what happened. The more experienced Sofians talked about the strong currents around the North Island of New Zealand, and how the currents turned that night against the wind that created a confused sea, consisting of steep peaks and deep troughs. The rough seas created by the effect were exceptionally hard on the *Sofia*. Chris remembered hearing a cracking sound with a deep “fump, fump, fump” following it (Bitterman, 2004, p.314). There was also the realization that Varmit, the most senior member of the *Sofia*,

had also perished in the sinking. “Nobody was upset that he didn’t survive. He would have torn the life rafts to shreds,” said Betty.

In passing, the crew discussed how to catch rain water to supplement their water stores. In an effort to determine their position, Captain Evan concluded that the storm blew them quite a bit north of their last known location, and it might be possible, if the water currents held, that the crew would be pushed back to the north side of the Northern Island.

The second day also presented the survivors with two more inconveniences to contend with. First, the survivors that smoked cigarettes aboard the *Sophia* were experiencing various forms of withdrawal symptoms. Secondly, all of the females began to menstruate. “Everyone was on birth control,” said Betty. “When the ship went down, all of that went down as well.” The more serious realization, however, was that there would probably be blood in the water. Later, survivors recalled that “sharks frequently circled the raft,” (An eternity adrift..., 1982).

At 6:00 pm, the survivors take their first nourishment since the *Sofia* foundered. Each meal consisted of “...15 milliliters of water, a small survival biscuit, and glucose tablets,” (N.Z. girl lost, five-day ordeal for 16 after waves sink schooner, 1982). “I was in charge of rationing the water,” Betty explained. “15 milliliters is about the equivalent of one tablespoon full, the biscuit was like a hard saltine cracker, and the glucose tablet was like a sweet tart.” As the crew received rations, one of the ladies saved her food allotment, instead of eating it. Fearing that holding the food without eating it would taunt the other crew members, Captain Evan ordered that from that moment forward, everyone had to eat their allotment as it was doled out.

At dusk on the second day, a pod of dolphins appeared near the rafts. “They were leaping and spinning, darting in and out, bumping and caressing the pontoons, playful, manic,

insistent,” recalled First Mate Pamela Sisman Bitterman (2004, p. 317). The survivors interpret this as a positive sign, recalling the many stories of dolphins aiding distressed sailors. The dolphins, however, soon abandoned the raft, leaving the survivors on their own once again facing nightfall. The crew settled in and tried to sleep in a nylon bottomed raft that was filled with 5 centimeters of water, regardless of how much they bailed.

Life Raft, Day 3

Well before dawn, on the beginning of the third day, someone on watch spots land. The survivors recognized it as the Cape Reinga light house, and became quite excited. Captain Evan ordered everyone to paddle by any means necessary. “We paddled toward the coast using cut-up plastic buckets on one raft and actually got within two miles of Cape Reinga,” recalled the Captain (Layborn, 1982, p. 1). The entire crew hung over the sides and kicked, dug with their hands, and paddled with both paddles for 12 hours straight, but never made any headway. The same strong currents that had beaten the *Sofia* to the breaking point also pushed the life rafts past the cape with surprising speed. Before long, the land’s visibility faded away, leaving only ocean as far as the eye could see. As depressing as this was, the Captain and crew were determined to remain upbeat about their situation. Poor attitudes were not tolerated:

We practice a tough-love form of ‘whiner squelching.’ We treat sniveling as any annoying self-indulgence that we will not tolerate. But...we lavish praise when it is warranted. For example, we’ll complement each other on our new svelte physiques....feeling for rapidly diminishing love handles results in proud exclamations of ‘Hey, I’m looking good!’ and we all enthusiastically concur,” (Bitterman, 2004, p. 318).

Captain Evan also prohibits any discussion of food. “We failed at that miserably,” remembered Betty Mason Parker. “We all decided to share our favorite recipes and foods with each other. Mine was breakfast, with fruit.” The Captain soon reneged, and even joined in on the conversation. Realizing that the talk about food had improved moral rather than squashing it, he shared his desire for a cheeseburger. First Mate Pamela yearned for watermelon and ice cream. Joey chose pizza and beer while (Little) Scott Reed “dreamt of ice cream and soft drink,” (An eternity adrift, 1982). “We were cold, hungry, and thirsty,” said First Mate Pamela, so our “images were pretty basic.”

Later that day, someone spots a large tanker, close enough to hear the engines and read the words EXXON on it. Everyone screamed and yelled. The watch signaled with the mirror, and Captain Evan decided the ship should easily see a flare and shot one off. The ship, however, continued to pass by, unaware of the nearby survivors floating in the water. At 6:00 pm the crew is given their second rationed meal. As rations are given out, Rodney calmly announced that he had not urinated the whole time they had been in the life raft. Clearly, his kidneys were failing. He then declines to drink his daily allotment of water, offering it to others. The First Mate sarcastically “assured him that if he is the first to die, which looks likely, we won’t hesitate to eat him,” (Bitterman, 2004, p.318). Rodney drank his water allotment. As night fell, all were cold, shivering, and understandably irritable from sleep deprivation.

Life Raft, Day 4

This day begins with the realization that the damaged raft will need patching once again. For the second time, the damaged raft is emptied. The weaker individuals move into the undamaged raft, while the rest enter the ocean. Once again, the raft is propped on the other one,

dried, and glued. After the repairs are made the survivors crawl back into their life raft. The crew also does their best to maintain optimism in the life rafts. Big Scott, always loud, had become increasingly obnoxious in the rafts. His attitude was generally more pessimistic than the rest of the crew. In an effort to prevent any other crew members from surrendering "...to pessimism's death knell," Big Scott is ordered to change life rafts several times during the day to prevent his extended influence on any one raft. Any time he "whined, we...quacked gaily in unison, drowning him out," (Bitterman, 2004, p. 319). Conversely, Trevor, who lost his glasses when the ship went down, continued to insist on taking his turn on watch. When he reports such delusional events as "hearing Maori singers and seeing whales breaching," the Captain quietly posts a secondary watch (Bitterman, 2004, p. 319). Throughout the ordeal, the survivors continue to shiver, huddle, and at one point sing. They reassured each another as best they could, even though the Captain estimated that they had been pushed past the Three Kings Islands, the last bit of land before Australia. He calculated that that it could take as many as 40 days to reach the coast of Australia, the next land mass. That evening, the rationed supper is again served at 6:00 pm sharp.

Life Raft, Day 5

As dawn breaks, the survivors realized that their life raft patchwork was not holding up, and the life raft would need to be patched yet again. However, there was little interest in jumping into the sea on successive days. It was determined that they would ride out the day with the damaged raft, and attempt another patch tomorrow. Additionally, after several windy, damp days at sea, it becomes apparent that their hair was now a matted mess. The men, growing hair and beards for their potential pirate movie parts, were not spared from this phenomenon. Betty

added that “someone had French braided my hair the day the ship went down, so I was spared from having to cut a large portion of my hair off after we reached shore.”

There were always daily chores to do as well, such as the constant bailing of rafts, attempting to dry soggy clothes, and keeping watch. That afternoon, another ship is spotted, and just like the one before it, it gets frustratingly close. In fact, it made a 45 degree turn around the life rafts, and Captain Evan tried to signal the vessel. This time he fired two flares, thinking they would be seen. “We fired flares but they just moved on,” recollected the Captain (Laybourn, 1982, p. 1). With only two flares remaining, it was a heartbreaking blow for the survivors. Rations were served, and afterwards, the Captain and Joey began quiet discussions about increasing their survival chances with salt water enemas. They generally agreed that it was indeed possible to infuse salt water into the body by using one of the small foot pumps attached to the life rafts. More serious discussions, however, were put off until tomorrow, to think over the idea. As the crew settled in for the night, Joey Bitterman, who had been dating First Mate Pamela, quietly asked her, “Would you let the skipper marry us at sea?” Forgetting there was no privacy on the life rafts, the crew “erupts into spasms of applause and volleys of congratulations,” (Bitterman, 2004, p. 321).

Life Raft, Day 6

The fifth 24 hour period in the life rafts had just ended in the early morning hours of February 28, 1982. A little after 2:00 am, Betty Mason Parker, who was on watch, spotted the lights of a ship in the distance. “Evan, I see a ship,” she said. Captain Evan was skeptical at first, not of Betty’s ship sighting, but because two ships had already passed them by without seeing them. In fact, by this point in the ordeal, four fishing vessels, in addition to the two ships,

had completely ignored them. “Keep an eye on it,” he replied. Some minutes later, Betty told Captain Evan, “It’s getting closer.” The Captain replied, “Do you see a green light or a red one?” Betty exclaimed, “I see both!” This created a commotion on the life rafts; the ship was headed straight for them. As the watch person changed, the new watch obsessively monitored the ship. When the ship was finally close enough, the Captain, in a calm and deliberate voice, ordered that the canopy on the life raft be taken down, and he shined his torch up into the air. “I shone a small torch at them, they saw it – an amazing piece of watch-keeping,” the Captain later recalled (Laybourn, 1982, p.1). Upon seeing the light, the ship turned on its powerful search light, thinking the survivors were a small fishing vessel. When this happened, Evan fired one of the two remaining flares, which resulted in the ship slightly altering its course. As the ship started to bear down on them, the survivors were afraid that it might run them over. Captain Evan then ordered everyone to “commence shouting for help...but you must prepare to immediately abandon the rafts...she’s aiming to run right clean over top of us.” (Bitterman, 2004, p. 323). He then fired off their last flare, but this time to ensure the ship’s crew knew of their location in the ship’s pathway.

Rescue

On the ship’s first attempt at rescue, the rough seas and high winds prevented the life rafts from paddling closer to the ship. “The wind was eight to ten metres a second and the sea was two to three metres and it was quite stormy,” recalled the rescuing ship’s Captain. “So I positioned the ship so the rafts were in the lee of the ship.” (Sofia rescuer tells of hysterical cries, 1982). After the second pass, the life rafts were protected a bit from the weather. The ship then lowered three rope ladders, along with some nets from the derrick. They also lowered two crewmen to assist the survivors if necessary. Slowly, one by one, the survivors of the *Sofia*

ascended the nearly 40 foot tall climb to the ship's deck. Bill Yost said that he was feeling quite strong, "so he ran up the ladder to be grabbed by two big Russian Sailors, but when they set him on his feet he collapsed because he hadn't used them for 5 days." (Stade, 1982). First Mate Pamela remembered that the weather caused the rope ladders to "flop around violently... I don't know if I am near the top when, all of a sudden, strong arms like forklifts are reaching down and hauling me over the edge. I land on my feet on the deck, and immediately collapse. My legs don't work." (Bitterman, 2004, p. 324). Captain Evan is the last of the 16 survivors to come aboard the rescuing ship.

At around 2:30 am on February 28, 1982, all of the survivors that entered the life rafts more than five days earlier were now safely aboard. The ship, they learn, is the Russian trawler *Vasilli Perov*. Ahead of schedule, the trawler is not due into Wellington, New Zealand for two more days. However, the ship's Captain, Leonid Ovchinnikov requested, and was quickly granted, permission to immediately enter port. During a telephone news conference aboard the *Vasilli Perov*, Captain Ovchinnokov acknowledged that "it was only the good eyes of his second mate," Sharunov Yuri, that spotted Captain Evan's weak torch light on the life rafts (Curiosity saves 16, 1982). "When we were no closer than 100 metres, we could already hear hysterical cries for help and so on...The survivors started to come on board...They were staggering and suffering from exposure," answered the Russian Captain. In addition to having their own doctor attend to the survivor's immediate medical needs, Captain Ovchinnokov gave the survivors dry clothing in the form of Russian merchant uniforms as well as a bottle of vodka to share. Aboard the ship, all of the survivors were huddled into a room, except Captain Evan who was invited into the Russian Captain's quarters, presumably due to his rank. Bill Yost remembered the celebration:

It was a real exciting experience. We got in there and I just – you know, looked at people and their nose would be wrinkled. Everybody was crying but nobody had enough moisture – there wasn't a tear in the place because there wasn't enough moisture in their bodies to make tears. (Stade, 1982).

Captain Evan, always the calm and calculating leader, finally exclaimed, “Thank God, at last I can have a glass of water.” (Laybourn, 1982).



Figure 5. An eternity adrift... (1982, March 2). The Nelson Evening Mail, pp. 3.

The *Vasilli Perov*, never balked at sharing whatever they had with the survivors, even though it had been at sea for an extended period of time and was running low on provisions. In

addition to the clothing and medical attention, the ship's crew stayed up all night tending to the survivors, preparing food, and offering support. "They really looked after us," recalled Little Scott. "Although they couldn't speak English and we knew no Russian, and we were able to start recovering." (An eternity adrift..., 1982).

The Russian Ship complete with 16 *Sofia* survivors arrived at King's Wharf in Wellington during the late morning of February 28, 1982, but not without one last geopolitical quandary. The Cold War, still very much alive in 1982, had created a political distrust between Russia and the United States that had engulfed their global allies. The New Zealand government, fearing political backlash, did not want the survivors appearing in Russian merchant uniforms on television. It was strongly suggested that the survivors change their clothing before disembarking the *Vasilli Perov*. The survivors, however, ignored the request but later agreed to be taken to the local New Zealand Maritime Police station to relinquish their borrowed clothing.

Finally, after a weeklong catastrophe, the survivors came on shore to an emotional scene, reunited with family and friends. After giving the survivors several moments to embrace loved ones, the police whisked them away; but as the survivors were making their way down the wharf, they all turned and gave their Russian rescuers three hearty impromptu cheers. Subsequently, all of the survivors received medical treatment, and two required hospitalization; Even so, all made full recoveries.

"We are Sofians. We are resilient...We are on a fine, proud tall ship south of the equator, and we really, really, really are paradise bound, at long, long, last."

– Pamela Sisman Bitterman (2004, p.169).

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Tragic end to Sofia dream

At least five Nelson people were on the schooner Sofia when she went down off North Cape last week.

Russian savours stop five-day nightmare

The pilot beam of a small torch yesterday ended the five-day nightmare as sea for the 12 men and four women who had to take to the lifeboats when Sofia went down in stormy seas off North Cape on Tuesday morning.

The torch beam was spotted by a sharp-eyed lookout aboard the Russian refrigerated transport vessel Perov. But the rescue came too late for an Auckland girl.

She died when the schooner foundered, in sea conditions of water, when hit by the second of two massive waves which broke over its bows within 10 seconds of each other about 2.30 a.m. in pitch darkness on Tuesday.

American-born skipper Evan Logan, speaking to New Zealand Press Association from the Yacht Perov by radio-telephone, said the Sofia sank about 20 miles off North Cape.

The schooner had been pounded by heavy seas and gave fierce winds for about six hours.

The crew were all in deck changing sails when the first of the massive waves crashed over Sofia's bows. The schooner was listing heavily at the time and when the second wave struck she had taken too much water to recover, he said.

She went down in seconds.

The crew reacted magnificently and the fall change was almost complete when time simply ran out, he said.

"I can remember thinking 'this is it' and we went down. This I was sharing a lurch around in the water looking for my crew."

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16 safe, one is missing

The Nelson crew members, now in Wellington, are Andrew Straight (28), Bart Williams, Mark Lattimore (24), Scott Reed (26) and Nigel Patten (21). Mr Patten came to Nelson from England last year.

Other crew members include skipper Evan Logan (U.S.), Pain Sieman (U.S.), Chris Jamn (U.S.), Wayne Venturi (U.S.), Bill Voss (U.S.), Mary Gallagher (Hawaii's Bay) and Betty Magon (U.S.).

Sofia was sailing to Auckland having left Nelson on February 9 and calling at New Plymouth on route.

The 16 survivors of the 61-year-old Russian schooner sailed into Wellington Harbour this morning aboard the Yacht Perov which picked them up yesterday after they had drifted for five days in two lifeboats.

All were suffering from exhaustion and dehydration when they were rescued early yesterday morning.

The survivors are probing their emergency rations, and then lived on one meal a day of 10 ml of water, a small survival biscuit and glucose tablets equivalent to two cubes of sugar.

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Sofia, as she was, in Tauman Bay last month... "like something out of the Onedin Line".

CREW DESPAIRED AS SHIPS SAILED BY

Four fishing boats and two ships passed tantalizingly close to the two lifeboats containing the 16 survivors before they were rescued.

"We first feared but they just moved on," Sofia skipper Evan Logan told a news conference in Wellington this afternoon.

"A lot by crew members to make their own way ashore also ended in frustration."

"We paddled toward the coast using cut-up plastic buckets on one raft and actually got within five miles of Cape Haig," Mr Logan said.

"Then offshore winds and tide currents pushed us back out to sea - that was a bit depressing."

The rafts were roped together. However, he said the Sofia crew displayed "superb character" throughout their ordeal and were "pretty happy" when the Russian ship suddenly appeared on the collision course with them Sunday morning.

"We thought they might run us down - we were ready to jump clear," Mr Logan said.

"I chose a small torch at the time, they saw it - an amazing piece of luck."

"The whole ordeal took less than three minutes."

"Mr Logan described as a 'fantastic piece of luck' the fact that the crew all surfaced together. All had been on deck for some time at the time, conditions which Sofia had taken in her stride in the past.

Asked how he felt on being rescued, Mr Logan said: "Thank God, at last I can have a glass of water."

Including how they spent the five days in the raft, he said: "We had time at exchanging our favourite stories and jokes."

"The crew were in high spirits all the time. We always knew we would be rescued."

Waiting on the wharf today were several friends and relatives. Among them was Mr Nobby Coates of Stoke who son, Trevor, 26, was on board.

Mr Coates said Trevor turned out on the lifeboat on Friday. The date? February 26.

He said that the crew were all in deck changing sails when the first of the massive waves crashed over Sofia's bows. The schooner was listing heavily at the time and when the second wave struck she had taken too much water to recover, he said.

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TIMELY CHANGE OF LIFERAFT

A liferaft check in Nelson was a lifesaver for those who sailed on the last voyage of the Sofia.

When the Sofia arrived in Nelson last year, the schooner's main liferaft was delivered to Hilder and Hilder Ltd for checking out.

A serviceman today said the main liferaft would not have inflated in an emergency. The gas bottles were empty.

"It was an old one they thought seaworthy. I don't know if I had to tend it."

"They then bought two Japanese liferafts which were serviced for them by Air New Zealand in Auckland."

"They didn't meet New Zealand survey standards, but they obviously did the job."

The serviceman said the regulations require canopies to be attached to liferafts and to inflate when the liferaft is inflated.

"With the particular brand of Japanese liferafts acquired for the Sofia the canopies were more in the nature of mats and had to be erected by the occupants. The provisions in them had instructions in Japanese and I suppose mine use was fairly obvious."

Liferafts are expensive and there is always a temptation for non-professionals to buy secondhand to save money.

"A cheap can is only useful with a liferaft he had bought cheaply. It turned out to be rotten."

"My experience with cheap liferafts is they usually cost more in the end than new ones - and they can cost you your life as well."

The Sofia was well equipped with jump, Port Nelson skipper, Mr Ross Stringer, said today.

He said the vessel had been re-equipped with good pumps before sailing from Port Nelson on her voyage to Auckland.

"As far as I am concerned she was all right, as long as you know what you were doing."

"Everybody knew she was old, but she was in quite good condition for her age."

SURVIVORS MOURN

Auckland girl Julie Osborne and Sofia's oldest crew member, the 26-year-old son of her husband, Scott Reed, are mourning today by Sofia's 16 survivors.

Julie, who joined the ship at New Plymouth, was Sofia's latest recruit, having been aboard only two days before the disaster.

"Julie disappeared in the middle of a sail change," skipper Evan Logan said in Wellington this afternoon.

"The last time we saw her she was standing behind the main shrouts."

"He said they first realised she was missing after taking a head count to the water."

"We called her name but could hear nothing."

Mr Logan said he last saw Vermont in his own cabin just before Sofia went down.

"He was obviously very upset and was running around."

Vermont joined the ship in Puerto Rico eight years ago, one year before Mr Logan joined.

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Figure 6. Tragic end to Sofia dream. (1982, March 1). The Nelson Evening Mail, p. 1.

Examination of the *Sofia*'s Leadership

The story of the *Sofia* is a great one; however, it is not unique. It was not the most death defying, nor the most physically or emotionally demanding survival experience. It was not the longest float in a life raft at sea, measured in days or miles traveled. In fact, it did not even push the boundaries of human endurance as far as other survivors have. However, there is no denying that the survivors of the *Sofia* were, in fact, subjected to their fair share of potentially fatal, catastrophic events. Therefore, it is worthwhile to further examine these events in an effort to more fully understand the effects of leadership on the survival situation; in particular, through the lens of Ronald Heifetz's Adaptive Leadership framework. Undoubtedly, survival situations are not exclusively dependent upon leadership for happy endings. Mother Nature, stamina, health, skill set, available resources, location, and pure luck also affect survival rates. Leadership, however, is generally the only variable that can be immediately controlled by a group of survivors, potentially making the difference between surviving and expiring.

Oftentimes, the mere mention of human survival stories conjures up images of Ernest Shackleton's Imperial Trans-Antarctic Expedition, the Chilean mining accident, or Ed Pulaski's actions during the Great Idaho Fire. A more interesting study, however, may be that of the shipwrecks *Grafton* and *Invercauld*. Each shipwreck stranded survivors on the Auckland Islands, although at opposite ends. Furthermore, the survivors of these two shipwrecks survived on the same island simultaneously, each group unaware of the other. For 12 months these survivors overlapped and unknowingly coexisted. One group experienced a 100% survival rate, while the other group endured a dismal 12% survival rate. The accounts of the *Grafton* and *Invercauld* survivors offer a unique look into the leadership of survival situations. Specifically, the controlled variables between both sets of survivors are more consistent, such as weather,

resources, and location. Accordingly, the leadership employed by both the *Grafton* survivors and the *Ivercauld* survivors will be used to compare and contrast the leadership employed by the survivors of the *Sofia*.

The *Grafton*

The *Grafton* was a small schooner sailing out of Australia prospecting for minerals, particularly tin, on Campbell Island, New Zealand. As a secondary venture the ship was to harvest seal furs if no mineral resources were found. When Campbell Island proved to be void of each, the crew of the *Grafton* decided to investigate the nearby Auckland Islands, which had not been fully mapped. Upon entering a sound, a gale blew up and pushed the ship into the rocky coast on January 2, 1864. The crew fought to save the ship and dropped anchor to steady it. The crew also manned the bilge pumps until the inflow of water became too much to bear. As the ship foundered, the crew salvaged as many items as possible from the ship and refused to abandon the vessel until day break. The next morning, the crew fashioned a rope to the wreck on one end, and attached it to shore on the other, using it to move the ship's shore boat safely back and forth with salvaged items from the shipwreck. These included food, tools, navigational equipment, a gun complete with powder and shot, and as many canvas sails that could be easily taken from the ship.

The survivors totaled five men: British born American, Captain Thomas Musgrave; Frenchman, Francois Raynal; Englishman, George Harris; Norwegian, Alexander Maclaren; and a Portuguese sailor, Henry Forges. Just before the ship foundered, Raynal had been very sick. However, with the help of his crew mates he made a good recovery. Recognizing the immediate need for shelter, the survivors fashioned tents out of the canvas sails. Soon the temporary tent

was replaced with a small hut, which they named Epigwaitt. The hut was made from available materials and those salvaged from the shipwreck, complete with rock chimney, stretchers to sleep on, a dining table, and a small desk. When the crew began to squabble, a leader, Captain Musgrave, was democratically elected from the group. Francois Raynal also fashioned a chess set, dominos, and a deck of playing cards for the survivor's entertainment. In order to alleviate unnecessary tension, however, Raynal burned the playing cards in their fire due to Captain Musgrave's distaste for losing. The men also fashioned clothing and boots out of seal skin, and ate seal meat, shell fish, and stilbocarpa roots when the ship's provisions ran out.

After surviving for 12 months, the group reached the conclusion that no one was searching for them any longer, and needed to save themselves. Raynal then built a crude blacksmith shop, complete with homemade bellows, to help convert the shore boat into a seaworthy vessel. On July 19, 1865, the small shore boat set sail with three of the survivors to the New Zealand mainland, arriving at Stewart Island five days later on July 24. The other two survivors were left behind due to insufficient room on the shore boat. One month later, however, Captain Musgrave arrived to retrieve the other two survivors (Druett, 2009).

The Invercauld

The Invercauld was a large ship, carrying only ballast, headed for Peru. The ship's Captain, George Dalgarno, had informed his crew to keep a watch for the dangerous coastline of the Auckland Islands. When land was spotted, Captain Dalgarno turned his ship in a southern direction, thinking this would avert the coast. The Captain, however, had erred in his calculations, and the southern turn caused the ship to scoot alongside one of the most dangerous

coasts in the world. Instead of slowing down, the Captain ordered more sail to be added, and the ship tried to push through a narrow opening between rocky cliffs.

Seconds before the *Invercauld* struck the jagged coast, the captain ordered the crew to drop anchor. The anchor, however, had been lashed down three days earlier per Captain's orders, with no chance of freeing it before the impact. The Captain also ordered that the shore boats be cut free, but as the crew tried to move in that direction, the ship hit the rocky coast and the ship began to break up immediately. As the next two or three large waves hit the ship, all 25 of her crew were washed into the sea. Of those, only 19 made it to shore alive.

The crew huddled together that night, and at day break they scavenged for anything that had washed ashore. A few pieces of lumber allowed the men to build a lean-to, however, it was only five feet wide by eight feet long, hardly enough space for 19 survivors. This caused fights to break out among the survivors. The crew also stripped the clothing off of their dead ship mates after they washed ashore, and scoured the beach for edible shellfish. Additionally, they collected several pounds of salted pork and biscuits that washed ashore. When food supplies gave out, four of the survivors decided to climb the rocky cliff in order to find food. One of the climbers, however, fell and was seriously injured. Later that day, Robert Holding ascended to have a look for himself. When he returned, three crew members had wandered off in a different direction, never to be seen again. The climber who had fallen eventually wandered back into camp, but was delirious and incapable of moving much farther. The Captain, First Mate, and Second Mate offered no direction to the survivors, and five days of inactivity were spent on the shore near the shipwreck.

After the fifth day, fourteen of the crew members climbed the cliffs in search of food and shelter, leaving the injured climber behind with a volunteer caretaker. The caretaker, however, immediately abandoned the injured climber, and rejoined the group. In less than a week, one crew member had been left for dead with three more missing. Several days later, the ship's cook would be found dead a few hundred yards from the survivors' primitive camp, left behind by a group of survivors looking for food. The survivors now numbered 14. Growing restless, several of the survivors returned to the wreck site, including Robert Holding. There, a conversation by the Boatswain turned dark, as he seriously suggested drawing straws to see who would be killed and eaten. Repulsed, Robert Holding left the group fearing for his life, never to see that faction of survivors again.

After some time, the main group eventually moved down to an abandoned settlement containing two structures that could provide protection from the elements. When the food there was exhausted, the First Mate Smith went in search of more resources. However, when he sent word back to the other survivors that he had some food, he discovered that two more of their group had died. Shortly thereafter, another man named Fritz passed away, and, according to Robert Holding, was eaten by another man named Harvey.

Eventually, Harvey and the Carpenter died, leaving only four survivors remaining. Smith and Holding moved to more fertile fishing areas, and Captain Dalgardo stayed behind with Second Mate Mahoney, who had an injured leg. However, Captain Dalgardo quickly abandoned Mahoney and joined Smith and Holding. Several days later, Holding went back to check on Mahoney, who had been dead for quite a while. In the span of three months and two days, 22 of the ship's 25 crew were dead. The remaining three survivors, however, eventually settled in, and

would endure another 9 months and 8 days before being rescued by the Portuguese ship Julian (Druett, 2007).

Adaptive Leadership Theory

Heifetz, Grashow, and Linsky describe Adaptive Leadership as “...the practice of mobilizing people to tackle tough challenges and thrive” (2009, p. 16). In its most basic sense, thriving is preserving biological DNA for continued survival, discarding DNA that is no longer relevant, and rearranging DNA to flourish in new ways or in more challenging environments (Heifetz, Grashaw, & Linsky, 2009, p.16). For this analysis, however, thriving simply means surviving.

The Adaptive Leadership framework classifies issues that requiring problem solving ability into two distinct categories: technical problems and adaptive challenges. Technical problems are those that are clearly defined with known solutions, such as hoisting or furling the sails in order to go from point A to point B; this most often falls under the direction of authority. Adaptive challenges, on the other hand, are issues that have arisen that require learning to fully understand and formulate possible solutions. The adaptive challenges are solved under the direction of stakeholders, in this case the surviving crews, who are most affected by the challenge. These stakeholders also exercise leadership, as opposed to authority, to create and enact solutions.

Authority is often confused with leadership, and is granted by one or several people expecting a predetermined set of tasks or objectives to be fulfilled (Heifetz et al., 2009, pp.19-28). Adaptive leadership, however, is helping “...people navigate through a period of

disturbance as they sift through what is essential and what is expendable, and as they experiment with the adaptive challenges at hand” (Heifetz et al., 2009, p. 28).

Diagnosing the Challenge

In order to use Adaptive Leadership theory, the challenge must first be diagnosed. In 2009, Heifetz, Grashow, and Linsky identified four archetypes of adaptive challenges: Gap between espoused values and behavior, competing commitments, speaking the unspeakable, and work avoidance (pp. 77-85). Ultimately, “Leadership begins...with the diagnostic work of separating a problem’s technical elements from its adaptive elements,” (Heifetz et al., 2009, p. 70). All four of these archetypes are experienced by the survivors of the *Sofia*, *Grafton*, and *Invercauld*. Furthermore, the archetypes are not mutually exclusive. In other words, there may be significant overlap in each archetype; put differently, adaptive challenges may present themselves as a blending of one or more of the four categories identified hereafter.

1. Gap Between Espoused Values and Behavior

In a general sense, this adaptive challenge presents itself as a discrepancy between what is believed and valued, and the actual behavior of an entity (Heifetz et al., 2009, p. 78). In this particular instance, there is a gap between the espoused values of a ship’s owners and operators and the ship’s actual ability, or failure, to meet those values. For the *Sofia*, this was the glaring adaptive challenge that was presented the instant the crew knew that the *Sofia* was sinking, even though they believed, and expected, that they would reach Auckland when they left port. Left as survivors, the crew was left to navigate the adaptive challenges of surviving in harsh conditions with very few provisions.

Similarly, the *Grafton* and the *Invercauld* were presented with a series of adaptive challenges when their respective ships went down. How each crew dealt with the adaptive challenges of survival will offer valuable insight into adaptive leadership successes and failures.

2. Competing Commitments

Competing commitments occur when a commitment, or responsibility, comes in conflict with another responsibility (Heifetz et al., 2009, p. 80). A glaring competing commitment during a survival situation is that of self-preservation versus group preservation. The *Sofia* survivors had to balance the primal instinct of self-survival with the competing concept of strength in numbers, requiring the survival of the entire group. For the *Sofia*, group survival was of the utmost importance. For example, Captain Evan stressed the importance of staying together, as opposed to becoming separated. The Captain also rationed food equally among the survivors. Furthermore, to ensure the damaged life raft was patched for part of the group's survival, the entire group had to endure hardship to make it possible. There is a balance to be struck, however, for optimum survival, which Heifetz and Linsky identify as the productive range of distress (2002, p. 108). When Rodney's kidneys were failing, he refused to drink his water, essentially abandoning his own self-preservation. In that instance, First Mate Pamela used a bit of gallows humor to entice Rodney to drink his water, which he did rather quickly. This moved the needle back into the optimal survival range, or the productive range of distress required to thrive in the survival situation.

The *Grafton* and *Invercauld* were also presented with this same adaptive challenge. The *Grafton*, like the *Sofia*, also placed an emphasis on group survival. The *Grafton* survivors nursed Raynal back to health while simultaneously navigating the new challenge of surviving with few

provisions on an uninhabited island. This also kept the survivors in the productive range of distress. The *Invercauld*, however, quickly spiraled into an every man for himself mentality, with little emphasis, if any, placed on the group's survival as a whole. When individuals were seriously hurt, assigned caretakers quickly abandoned them, leaving them for dead. Additionally, there was at least one discussion of killing a crew member to feed several others. This weighted the balance heavily towards the self-preservation side of the competing commitments, causing a total loss of the productive range of distress. This was disastrous for the *Invercauld* survivors.

3. Speaking the Unspeakable

It is necessary for shareholders to speak openly and honestly in order to examine and consider the full range of perspectives needed to develop solutions to adaptive challenges (Heifetz et al., 2009, p. 82). For the *Sofia* survivors, Captain Evan Logan spoke open and honestly with his crew about their navigational position, their potential to float back to land which ultimately failed, and the reality that the next landfall was most likely 40 days away. The survivors, particularly Joe and Captain Evan, discussed salt water enemas to increase hydration, a repulsive thought at first that may have become requisite had they not been rescued. Additionally, when Captain Evan Logan prohibited talk about food, the crew talked about it anyway, using it as a form of entertainment and escapism to cope with their situation. Recognizing the benefit, Captain Evan later joined the conversation.

Likewise, the *Grafton*'s crew was also open and honest with each other. After 12 months of surviving on Auckland Island, the survivors faced the brutal reality that no one was coming to the island to save them. After much genuine and unfiltered brain storming, they decided to

modify their shore boat in order to make an ocean crossing with it. All five of the survivors also openly discussed starvation, with food and firewood discussions taking priority.

The *Invercauld*, unfortunately, used weak technical solutions in this particular adaptive challenge. Honest discussions amongst crew members were not present. In fact, the disassociation between the crew members was never more apparent than when Captain Dalgarno could only recall two of the six crew member names that drowned when the *Invercauld* foundered on the rocks. There were no productive conversations noted by the survivors, and different perspectives were discarded solely due to a person's rank, or lack thereof. As a point of illustration, Captain Dalgarno ordered Robert Holding to be silent after realizing the three remaining survivors would be saved. The Captain, insisted that only he would tell the events of their ordeal, and insinuated that Holding had been insubordinate, and therefore untrustworthy (Druett, 2007, p. 201).

4. Work Avoidance

Work avoidance is the resistance of adaptive change, and often manifests itself in two ways: by diverting attention or by diverting responsibility (Heifetz et al., 2009, p. 84). After the *Sofia* foundered, the work avoidance adaptive challenge manifested itself in Big Scott, who was very vocal in complaining negatively about his situation, when in all reality all members were in the exact same situation. When Big Scott tried to marginalize issues or place blame on someone, the rest of the crew drowned him out with sounds, or insisted that the change life rafts.

The *Grafton*, meanwhile, encountered this adaptive challenge when it became clear that all five survivors would not be able to sail off the island at the same time. This caused some angst amongst the three men at risk of being left behind, George Harris, Henry Forges, and

Alexander McClaren. All three were generally unwilling to stay behind and survive under the harsh conditions when an opportunity for rescue presented itself, regardless of the risk. George Harris and Henry Forges were chosen by Captain Musgrave and Francois Raynal to stay behind, mainly due to their good chemistry and ability to cooperate well with each other.

For the *Invercauld* crew, their time on the Auckland Islands was riddled with work avoidance. Initially, no one returned to retrieve any sizeable amount of resources out of the wreckage, even though all complained about their meager resources. After reaching shore, the survivors made one inadequate lean-to shelter, five feet wide by eight feet long. No other attempt was made to erect a larger shelter, causing fights to break out. The Captain and crew also spent four days sitting on the beach, without any productive exploring or assessment of the terrain or available resources. Additionally, the officers of the *Invercauld* still expected the surviving seamen to care for them, meeting their needs, while the officers were unwilling to physically work, clearly illustrating the difference between authority and leadership. When the remaining group stumbled upon a couple of abandoned structures, they put forth little effort to improve them, and ultimately abandoned them. This left all survivors exposed to the harsh climate in the Auckland Islands, where rainfall occurs more than 310 days per year, and 20 knot or greater winds on more than 330 days per year (De Lisle, 1964, pp. 41, 42).

Diagnose the Political Landscape

Diagnosing the political landscape involves understanding relationships and the nature and expectations of each department in an organization (Heifetz et al., 2009, p. 89). In the case of survival situations, it is necessary to understand the relationships and associated factions of the group. Luckily for the *Sofia*, the political landscape had been thoroughly diagnosed before its

last voyage. The half-baked mutiny exposed underlying conflict and motives for challenging Captain Evan. First, greed had driven Evan's opposition, driving them to abandon safety for the chance at a movie contract. Secondly, more senior crewmen had taken offense to Evan's quick rise to Captain, and took the opportunity to challenge it. Generally apolitical, Captain Evan garnered the favor of those who supported him. Additionally, he broadened his "...focus beyond just the people in the room..." (Heifetz et al., 2009, p. 94). By emphasizing the need for more safety trials of the *Sofia*, Captain Evan promoted the idea that safety was not only important for the crew itself, but also for extended relationships that existed on land, whether family, friends, pets, or other relationship, solidifying his position on the ship. This head start of political diagnosis allowed the crew to function smoothly once they found themselves in a survival situation; with all crew members loyal to the survival of the group, Big Scott being the exception.

The politics of leadership on the *Grafton* was more measured. Captain Musgrave and Francois Raynal spent quite a bit of time assessing each other's loyalties. Captain Musgrave even felt threatened by Raynal's leadership ability at times. Raynal, however, was quick to pick up on Musgrave's feelings, and suggested that the group vote to appoint a leader after the survivors' basic needs had been met on land (technically the Captain's leadership authority went down with the ship). Raynal openly lobbied for Musgrave as leader, which came to fruition through the voting. All men involved, however, were loyal to the survival of the group, which provided a strong bond that helped address adaptive challenges.

The Invercauld's leadership structure did not diagnose the political landscape until it was much too late to save most of the crew. In fact, the distrust and contempt among crew members lasted the entire ordeal. Additionally, the officers relied blindly on their elevated status, wasting

precious time assessing the political leanings and loyalties of the survivors. Eventually Robert Holding would garner the weak support of Captain Dalgarno and First Mate Smith, and loosely lead the group until they were rescued. Unfortunately, Holding's leadership ability was not tolerated by the officers until most of the crew had perished.

Make Interpretations and Design Effective Interventions

“As people begin to identify the adaptive elements of the challenge, they will legitimize the need to learn new ways, begin to identify the losses that they will have to take in order to make progress..., and shift their mind-set from conflict avoidance to conflict resolution” (Heifetz et al., 2009, p.115). Effective solutions for adaptive survival problems require more than creativity and widespread support, they must have accuracy. As more information is absorbed by the surviving crew, multiple interpretations of the situation can be assessed, allowing for more fertile discussions and reasonable solutions to the challenges.

In the *Sofia's* case, most all of the crew members facing the adaptive challenge after the ship sank, were willing to share clothing with other crew members at the risk of losing comfort. They recognized that, not only was there a risk of hypothermia, but a risk of losing the group's engagement which was necessary to formulate solutions moving forward. Everyone also came to the realization that drifting on the life rafts for an extended period of time was a real possibility. Therefore, the survivors agreed with Captain Evan's suggestion to forego their first two days of rations in order to prolong their time aboard the life rafts, maximizing the chances of being rescued. Later, after a flare was frantically shot off at an airplane, the potential use of the torch (flashlight) and flares were discussed and assessed, with the Captain taking control of

them. Through it all, the *Sofia*'s crew continuously reassessed their situation as accurately and creatively as possible and adjusted their interventions to ensure a constructive survival plan.

The crew of the *Grafton*, like the *Sofia*, was quick to realize the adaptive challenges they faced. The crew immediately recognized that shelter in such a harsh environment was essential for survival, and crafted a temporary shelter out of their ship's scavenged sails. Additionally, the crew realized, just as the *Sofia*'s crew did a hundred years later, that the timeframe for their newfound situation may be indefinite. Therefore, they scavenged anything from the ship that might prove useful to them, often swimming and diving to retrieve items of particular interest, such as a thin copper patch on the hull that was eventually fashioned into a copper pot. The survivors also recognized the need for nourishment, sending a couple of them out hunting at a time, while leaving several others behind to tend camp. Hunting trips involved the loss of much comfort, enduring extremely wet, cold, and windy conditions to supply meager amounts of food for everyone. Eventually, after much discussion, the survivors determined that they would need to save themselves since a rescue party had not arrived during their 12 month stay on the island. The survivors reassessed their situation and designed new effective interventions in order to save themselves. Raynal spent tremendous time and effort in order to create a small blacksmith's hut in camp, and used scrap metal from the shipwreck to make nails and tools needed to modify the shore boat for ocean travel. Furthermore, the crew hunted even more to stockpile food for the ocean voyage in the small vessel.

For *Invercauld* survivors, no one interpreted the problems they faced as adaptive challenges. In other words, the officers continued to use technical solutions to challenges that required learning to cope with a new environment. The survivors were also unsuccessful at meeting basic human needs, unwilling to learn how to build adequate shelter or harvest food.

Furthermore, they never formulated a strategy for sustained survival. Robert Holding was the only individual that correctly diagnosed the adaptive challenges that the survivors faced, but his inability to convey this to the others proved fatal. Only after most were dead and the officers became desperate did Holding effectively design effective interventions, such as crude shelter construction, hunting, and tool making from scavenged items at the abandoned settlement.

Act Politically

“Ignore the human complexities when you try to lead adaptive change, and you greatly reduce your chances of succeeding—to say nothing of surviving” (Heifetz et al., 2009, p. 133)

On the *Sofia*'s life rafts, the crew began to fantasize about food. Fearing the discussions would adversely affect their morale, Captain Evan ordered an end to it. The conversations, however, continued, and Captain Evan recognized that discussing food and sharing recipes became a positive, therapeutic exercise for everyone. Acknowledging the importance to the crew, he joined in the conversation. While small and seemingly insignificant, this small gesture strengthened the relationship between Captain and crew.

For the *Grafton* survivors, Francois Raynal proved to be invaluable at understanding the relationships and alliances among their group of survivors. Reading correctly that Captain Musgrave was beginning to withdraw from the group, Raynal suggested electing a leader while on land, bolstering Musgrave's spirits and reinvigorating him after he was elected. Captain Musgrave also proved to be competent in his assessment of the group's dynamics, and taught reading classes on the island to pass the time. Finally, Musgrave and Raynal picked the two survivors based on their political assessments. George Harris and Henry Forges were chosen to remain behind due to their positive relationship with each other, reducing the risk of conflict and

maximizing the potential for survival as the other three attempted to reach mainland New Zealand.

For the *Invercauld* group, the lack of political thinking may have been even more dismal than their inability to recognize, diagnose, and design effective interventions to adaptive challenges. Even Robert Holding, the one crew member who recognized and diagnosed many of the adaptive challenges, was woefully ineffective at the political thinking required to convey his assessments and suggested resolutions to the rest of the group. It was only when the remaining survivors became increasingly desperate that Holding's proposed interventions fell on a begrudgingly interested audience. Following the immediate rescue, Captain Dalgarno fell back into his authoritarian mindset and ordered Holding to refrain from talking to anyone about the ordeal, proof of the broken, fragile nature of their relationship.

Orchestrate the Conflict

In *Leadership on the Line: Staying Alive through the Dangers of Leading*, Heifetz and Linsky argue that "...the challenge of leadership when trying to generate adaptive change is to work with differences, passions, and conflicts in a way that diminishes their destructive potential and constructively harnesses their energy (2002, p. 102). Additionally, they acknowledge that "adaptive work, from biology to human culture, requires engagement with something in the environment lying outside our perceived boundaries" (Heifetz, & Linsky, 2002, p.101). Generally, Heifetz and Linsky make the case that the right amount of conflict causes a productive range of distress; a bullseye of sorts for tackling adaptive challenges. If too much conflict is encountered, then the group may break apart. If too little conflict is encountered, the group may be unproductive.

There is no doubt that in each of the three survival situations, orchestrating conflict was a major contributing factor for each group's success or failure. The *Sofia's* crew, just as the *Grafton's*, addressed conflict positively, with the end goal in mind. When the conflict became too heated, a cooling action was performed, such as Evan rescinding an order regarding food talk, or Francois Raynal tempering expectations when Epigwaitt was taking too long to build. Conversely, the conflict could be notched up to make the group more productive. Captain Evan charged the surviving Sofians with tasks and responsibilities on board the life rafts, even though many were seemingly taken in nature. This added responsibility increased the stress level of the crew to bolster the thinking necessary to overcome the adaptive challenges they faced. Similarly, the *Grafton's* crew expected everyone to perform needed chores, expecting more as weather dictated to make their survival camp as hospitable as possible, which in turn created more out of the box thinking to solve challenges as they arose.

On the other hand, the *Invercauld*, was never able to harness, and thus orchestrate, the conflicts that arose from their situation. In fact, conflicts seemed to increase in intensity until the breaking point was reached and the group splintered. This occurred on several occasions, resulting in a loss of potential problem solvers, and creating a disequilibrium that was not conducive for tackling adaptive challenges.

Building on Heifetz and Linsky's concept of orchestrating the conflict, survival situations must also take conflict with their environment into consideration. This includes food and water supply, weather, terrain, and health. Not only must conflicts be orchestrated amongst individuals in a survival group, but conflicts with the environmental factors that affect the group must be orchestrated as well. For example, the *Sofia's* crew did not get into the water at night in order to patch their life raft; they got into the water during daytime hours, enlisting the help of the sun to

prevent unnecessary cooling of body temperatures. Comparatively, the *Grafton* survivors salvaged pieces of their shipwreck during low tides, which presented the greatest opportunity for retrieval of items in relation to the risk of those involved retrieving those items. While this seems overwhelmingly obvious, the crew of the *Invercauld* overwhelmingly failed at this simple task: orchestrating the conflict with Mother Nature. In fact, there was at least one time when the *Invercauld* survivors spent 20 days straight without any substantial shelter during late autumn (Druett, 2007, p.124). Having to endure such a cold, windy, and rainy climate was extremely dangerous at best, and probably contributed to the high mortality rate as much if not more than starvation. Unable to orchestrate the conflict with their environmental situation, the *Invercauld* survivors fought against nature itself as stubbornly as they had fought against each other.

Build an Adaptive Culture

Building an adaptive culture requires a continued emphasis on honest communication, shared responsibility, independent judgement, and experimentation for continued learning. The *Sofia*'s survival story, as compared to the *Grafton*'s and the *Invercauld*'s, was much shorter in duration, which (thankfully) limited the ability to see how the group could foster and sustain their adaptive culture for the long haul. As noted, the *Sofia* survivors shared responsibility, communicated honestly, and exercised independent judgement on the life rafts. However, they were at the precipice of having to reassess their situation, experiment with hydration techniques, and devise new survival strategies for an extended amount of time. "We did not have to find out what we might have become" reflected Pamela Sisman Bitterman.

The *Grafton* survivors, on the other hand, spent 18 months stranded on the Auckland Islands. Their ability to honestly communicate, independently think, and share responsibility

equally afforded them the ability to successfully maneuver through the many adaptive challenges they were presented with. While their existence on the Auckland Islands was by no means pleasant, they were able to establish a more permanent camp and foster an adaptive culture. The survivors also experimented with boat building and tool making techniques, which eventually allowed them to create a sea worthy vessel in order to save themselves. In a more basic sense, they thrived.

During their entire episode on the Auckland Islands, the *Invercauld* survivors were ineffective at even recognizing adaptive challenges, much less making interpretations, crafting interventions, acting politically, or orchestrating the conflict. Without understanding the basic building blocks of Adaptive Leadership, the *Invercauld* survivors fell victim to their own system of failure. Even when Robert Holding, Captain George Dalgarno, and First Mate Andrew Smith settled into the final nine month period of their survival ordeal, it was never based on an adaptive culture. In fact, the final three survivors were filled with distrust, contempt, and ill will for each other, adding to their misery.

Conclusion

The *Sofia*, the *Grafton*, and the *Invercauld* all fell victim to severe storms in the general vicinity of New Zealand; all three made mental errors that contributed to the loss of their ships. However, the way each ship's crew reacted after being thrust into survival situations was very different. The crews of the *Sofia* and the *Grafton* immediately recognized that their overall situation shifted from technical problem to adaptive challenge as soon as their respective ships went down. Both crews, and their Captains, immediately began to interpret the new found challenges and formulate interventions to overcome the challenges. For the *Sofia*, quick

assessment and swift intervention allowed Captain Evan to secure both life rafts together and signal with a torch for other survivors in the water. For the *Grafton*, safely getting ashore and making a hasty tent to provide shelter from the grueling climate was instrumental in addressing their immediate adaptive challenges, while allowing the survivors to more properly employ the Adaptive Leadership framework to navigate additional adaptive challenges such as attending to Raynal's sickness, building more suitable shelter, and formulating a rescue strategy. On the other hand, the *Invercauld's* crew never properly diagnosed their immediate adaptive challenge of providing basic human needs after their ship went down, and therefore never made any attempt to build a substantial shelter or seek more productive food supplies until the condition of many survivors was beyond salvageable.

Additionally, scavenging resources, from either the wreck or the abandoned settlement, was instrumental in providing options for making interpretations and designing interventions for adaptive challenges. Items such as navigational equipment, sails, a gun, matches, and wooden planks provided valuable options for competent assessments and the ensuing design of the interventions needed to overcome life threatening adaptive challenges. The *Grafton's* crew, and to a lesser extent, the *Sofia's* crew, made good use of the salvaged items at hand. The *Invercauld's* crew, unfortunately, did not immediately recognize the need for scavenging resources and their value for improvisational solutions. By the time they realized the importance of scavenging, it was too late for most of the survivors.

The survivors of the *Sofia* and *Grafton* also recognized the strength of their collective group. Both made conscious efforts to recognize and treat the sick individuals, even if medical supplies were limited or nonexistent. With all individuals participating in the group, more perspective and insight into adaptive challenge interpretations and designing interventions was

possible. No doubt, this increased the probability for survival. Additionally, placing value on sick and injured survivors positively impacted stakeholder interests and potentially strengthened relationships and/or created new alliances in order to later mobilize adaptive work.

Unfortunately, the *Invercauld* survivors placed individual priorities over the collective group, leading to confrontation, violence, separation, and ultimately death for most.

Finally, it would be remiss to ignore the influence of random uncontrollable occurrences during a survival situation. Whether due to luck, fate, or Divine Providence, there are often occurrences that heavily contribute to the success, or failure, of survivors in those situations. For the *Sofia*, the proper inflation of the life rafts and subsequent accessibility to the crew (even though one was damaged), as well as the collection of a bucket of survival rations, were random events that significantly contributed to their successful survival. The *Grafton* survivors were also granted the good fortune of location, wrecking in a fertile seal hunting area. This provided food, fur, and blubber for many of the *Grafton* survivor's basic needs. Surprisingly, the *Invercauld* survivors were also graced with good luck, in the form of a nearby abandoned settlement that contained shelter, tools, and better (but not plentiful) food sources. However, the group was unable to take advantage of it, due to their lack of adaptive leadership abilities. It just goes to show that even luck must be utilized, preferably using the practice of Adaptive Leadership.

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