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SURVIVAL HOMICIDE IN SPACE

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1. Introduction

From the biological point of view, space is perhaps the most hostile environment to human life. In the endless ocean of night that stretches between the planets and the stars, an unprotected man cannot long survive the multiple rigors of hard vacuum and extreme cold. Nowhere is there air to breathe, water to drink, food to eat, atmosphere to screen out lethal ultraviolet and x-rays, and so forth.

Human beings find conditions at the surfaces of other worlds no less inhospitable. On Earth's moon (Luna) there is virtually no air, and no water has been found in the surface rocks. Temperatures in the shadows and on the "dark side" are cold enough to condense normal Earth air into liquid. On Mars a tenuous unbreathable atmosphere of carbon dioxide (which animals and people exhale as waste) exists at one-hundredth the sea-level air pressure on Earth, and temperatures range from a bit above freezing at the equator in summer to well below the "dry ice sublimation point" (-110 °F) at winter near the poles. The planet Venus also has a predominantly carbon dioxide atmosphere, but with a pressure a hundred times greater than sea-level on Earth and temperatures hot enough to melt solid lead. Jupiter and Saturn have a poisonous mixture of ammonia and methane for "air," and they, like Uranus, Neptune and Pluto, are far too cold for unprotected human survival.¹ Of the worlds circling other stars than our Sol we can say little at present, except that conditions in these hypothetical distant solar systems cannot be much less hostile than in our own.²

As mankind thrusts out into space, astronauts will come to rely upon the proper functioning of artificial environments and habitats. Fail-safe technologies will be of utmost importance, as man entrusts his lives into the keeping of his machines and precision-engineered devices. But despite all precautions, all multiply-redundant backup systems, and all fine intentions, accidents of a life-threatening nature will, upon occasion, occur.

Some will be fairly trivial, admitting of easy repair or replacement. Probably most equipment malfunctions can be dealt with readily and effectively, with no loss of life. A small residue of cases, however, doubtless will involve serious or total malfunction of the entire life-support mechanisms which are responsible for keeping human beings alive when they travel in space. Rescue missions, though immediately dispatched, may not be able to reach the scene of the disaster soon enough to save the lives of all of the astronauts. There may exist only enough air, water, or food to support, say, two crewmen until help arrives, but since, say, three persons are alive aboard the crippled vessel or habitat, all may die.

A legal and ethical conundrum immediately presents itself: Is it permissible to sacrifice the life of one in order to save the lives of two? The sacrifice, when performed by the two in a situation where only two can survive, is called "survival homicide." In the simplest such situation involving the urgency of "necessity," one innocent person must lose his life here and now so that others may survive.

The manner of selection of the victim and the legality of the sacrifice in the context of a space disaster are the principal subjects of this paper.

2. The Incidence of Survival Homicide

In the science fiction thriller *Marooned*, which provided the inspiration for the present work, three American astronauts are trapped in a small space capsule (orbiting 280 miles above the Earth) after its retro rockets fail to fire.³ A rescue mission will arrive in exactly four hours, but only 2% hours of oxygen are left in the spacecraft's air tanks. The Director of Mission Control, realizing that just enough air remains to allow two men to survive until rescue but not all three, discreetly suggests by radio that the crew should somehow find a way to "reduce" their oxygen requirements. The trapped men get the hint, and abruptly cut radio contact. Author Caidin's narrative of the plight of the marooned astronauts is charged with emotion as the moment of decision draws near:

(The characters include James Pruett, spaceship commander; Walter “Buzz” Lloyd, astronaut; and Clayton Stone, astronaut/scientist.)

Stone put his pert in midair again. “Son of a bitch.” He grabbed for the pen, closed the point. “Four hours.”

“Yeah.”

“That’s a long four hours, Jim.”

“I know.”

“We’ll be pretty cold by then.”

“I know.”

They let the silence embrace them...Buzz opened his eyes wide. He looked at Stone and then at Pruett. “Let’s get it out in the open, huh?”

No one answered him.

Buzz shrugged. It was more a tremor through his body. “I guess somebody’s got to go,” he said. Still no reply. “Well, that’s what we’re talking about, isn’t it? One goes and two stay, right?”

They stared at him, at the naked thing he’d brought into the open.

“Well”, how are we going to do it?”

The silence rushed back in. Lloyd turned his head to left and right, looking at each man individually.

“No use wasting all that scientific training they gave me,” Stone said after a while.

“Let’s do this scientifically.”

They waited for him to go on.

“The two big guys throw the little guy out.”

Buzz exploded in laughter. He gasped for breath, fighting for air while Pruett slapped him on the back.

“That – that’s an idea you got there,” he choked.

Again the silence.

“Well, what the hell?” Buzz persisted. “We got to do something.” No answer. “We got to talk about it, don’t we?”

“We could do it by chance,” Stone offered. “I tear trips out of the pad. One short, two long. Guy with the short goes.” His eyes closed painfully. “Goddamnit, we can’t do that.”

“No,” Pruett said softly. “We can’t do that. None of us would do it, either.”

No one said anything.

Lloyd pushed himself upright. “All right. I’ll go.”

No answer.

“Look, I know you want me to go.”

Silence.

“I – I’m the weakest. I’m eating more oxygen than either one of you two.”

Complete silence except for their breathing.

“Isn’t anybody gonna say something?”

He spun away from them, burying his face so they couldn’t see the tears.

Snap.

Lloyd and Stone looked up as Pruett released his couch straps. Pruett turned himself around, braced his body and reached beneath the couch. He withdrew his hard spacesuit and stretched it out in the air. It floated, quivering gently. Pruett turned again and started to don the suit.

“I’m going out to look at the engine,” he said.⁴

Fiction frequently anticipates fact. Thankfully, the space disaster scenario envisioned by the author of *Marooned* has not yet come to pass, but this is no cause for complacency about the problem.

There have been a few close calls in recent times. Perhaps the best-known of these was the Apollo 13 moonship accident, involving the explosion of fuel tanks “below deck” while the spacecraft was *en route* to the Moon. The mission was scrubbed, but the astronauts were by then kinematically committed to a trajectory which would carry them all the way around Luna and then back to Earth (a journey of several days). Had all oxygen supplies been seriously jeopardized by the explosion, the issue of survival homicide might have been presented in practical form as early as 1970.⁵

2.1 Historical Examples

It must be recognized from the outset that survival homicide is an extreme measure of last resort. If the many reports of human beings trapped without air or food are examined carefully, it is soon discovered that such killing is a very rare occurrence indeed. People, it seems, instinctively prefer to die en masse rather than sacrifice a few of their number so that others may live.⁶

The submarine disasters are a case in point. In these accidents, typically, an undersea military vessel is torpedoed, rammed from above by a surface ship, or otherwise rendered without buoyancy – and rapidly sinks to the ocean floor.⁷ A number of men are trapped in a small air pocket with only hours or minutes of oxygen remaining. Help is on the way, but rescue takes time. Apparently, survival homicide is rarely adopted in these situations.⁸

An example of this inaction is provided by the Dardanelles Disaster of 1953.⁹ At 2AM on April 4, the Turkish submarine *Dumlupinar* (formerly the *U.S.S. Bumper*) was struck by the Swedish freighter *Naboland* in the Dardanelles narrows. Arriving 9 hours later, divers from rescue ships found the sub lying on the sea bottom under 228 feet of water. The bow was crushed and flooded, but watertight bulkheads in the stern had saved 22 crewmen from drowning. The trapped men managed to release a marker buoy with a telephone relay inside. “Save us,” they cried out. “We have air for only a few hours.” While several became hysterical and tried to break out, most remained calm, keeping up their spirits by reading from the Koran. As the end drew near, the rescue effort, hampered by ill weather, the message came over the phone: “If you cannot save us, please send our last greetings to our families. We are praying to Allah while we wait for death.” There is no evidence of any homicidal behavior by any of the trapped submariners.

Coal mine disasters furnish additional opportunities for the employment of survival homicide, but in practice it is almost never resorted to. Miners live with the threat of death every minute of their working days, and seem willing, as a general rule, to try to stick it out together in “civilized” fashion.

For example, a “bump” in Dominion Steel & Coal Company’s No. 2 mine in Springhill, Nova Scotia on October 23, 1958, trapped twelve miners under 4000 feet of solid rock.¹⁰ For six days the men survived in a small air pocket 100 feet long and 3 feet high, 2½ miles from the mine entrance. By the fifth day, all food and water had been consumed. The men were weak, nauseated and intolerably thirsty. Their eyes smarted in the stale air and their lips were parched and bloated. In the Stygian darkness they lived in a kind of half-trance that was neither sleep nor total wakefulness. Said one miner after being rescued on the sixth day: “I began to think it would have been better if I had died. I lost all hope.”¹¹ But there was to be no death at the hand of man – the question of survival homicide seems never to have been raised by any of the trapped miners during the entire period of their involuntary entombment.¹²

A raging underground fire in a coal seam at the mine of St. Paul Coal Company in Cherry, Illinois on November 13, 1909, rapidly filled shafts and passages with an unbreathable mixture of smoke and gases. A group of 21 miners, led by the night foreman, barricaded itself into an entryway where the air was not yet spoiled. The makeshift potential tomb was about 100 feet in length. Water was strictly rationed to two swallows per day, and there was little food. Men began chewing their leather gloves and cap bands, licking grease from their lamps, and gnawing bark from the wooden support props. Once a miner was caught stealing water. One of the “guards” who seized him was slashed in the scuffle, but the culprit was knocked down with axe helms and tied up. But there was no talk of survival homicide among

the men – despite the fact that most had lost all hope of being saved – and the entire party was finally rescued after a week underground.¹³

Fourteen men trapped in Centralia Coal Company's No. 5 mine in March of 1947 were not so fortunate.¹⁴ After four days of searching for survivors, rescue teams found the last of No. 5's day shift lying face down on the tunnel floor. They had not been killed outright during the underground explosion that had caused the cave-in, but the supply of oxygen had been good only for a handful of hours. It is mathematically almost certain that by sacrificing a majority of the men a few might have had enough air to survive until help arrived. Rather than homicide, however, the miners chose to write farewell letters to loved ones in the time remaining to them. One man had scrawled: "It looks like the end for me. I love you honey more than life itself. You are the sweetest wife in the world. Goodbye, Honey and Dickey." Another note was addressed to two boys: "Be good boys. Please your father. O Lord help me." Another read; "My dear wife: Goodbye. Name the baby Joe so you will have a Joe. Love, all. Dad." The possibility of survival homicide may never have been considered, but if it was, the proposal appears to have been rejected.

Survival homicide is somewhat less rare in instances of snow peril disasters, but it is still remarkably infrequent.¹⁵ Typically, a small group of people is trapped for weeks or months in blizzard conditions without enough food to stay alive for very long. Under such travail the Western taboo against cannibalism often falls, but the victims almost invariably die a "natural" death before being eaten. Usually, no actual killing is involved.

Perhaps the most spectacular disaster in the history of western migration in frontier America was the Donner Party tragedy. A wagon train of hardy pioneers, led by Donner and Reed, foolishly attempted to cross the Rockies into California near the end of the Fall season. Heavy snows forced the expedition to a halt at what is now known as Donner Pass, located a few miles from Lake Tahoe on the California-Nevada border, in late November, 1846. The erstwhile settlers erected makeshift log cabins for what was believed to be only temporary shelter, while the stronger members of the Party would press on to seek help. Two camps were established less than a mile apart, a total of nine families (81 people) including men, women, children and infants.¹⁶

Getting out of Donner Pass proved more difficult than originally believed. Several sorties up the valley failed. Finally, on December 16, a party of 17 people (12 men and 5 women)¹⁷ set out with grim determination to try again. The "snowshoers," as they called themselves, took along six days' rations for each person, but it was not nearly enough. After wandering off course for eight days in the mountains, trapped in a new snow flurry, and nearly comatose from starvation and the numbing cold, the idea of cannibalism was suggested. Since no one had died yet, survival homicide would be necessary.

According to George Stewart, author of *Ordeal by Hunger*:

However much they had thought of it, no one had yet put it into words. The pause lengthened, and then Patrick Dolan voiced it – they should draw lots to see who should die to furnish food for the others. Eddy seconded. But Foster objected, and of all motions such a one most surely must require unanimity. And even if they drew lots, how would they accomplish the deed? Was a man to butcher a man like an ox, or cut his throat as if he were a sheep?¹⁸

The proposal having been rejected, another was promptly set forth by Eddy:

Let two of them, he said, take a six-shooter, and fight till one or both were killed. Thus a man would have a chance for his life, and if he lost, would die in hot blood, not slaughtered like a pig. It was a man's way. But again someone objected, for the scruples of civilization were dying hard.¹⁹

Finally, Eddy suggested that the only course of action left to the snowshoers was to struggle on until someone died. They did not have long to wait. On December 24, a terrible blizzard assaulted the

group and pinned them down for several days. When the storm had passed, five men were dead. On Sunday morning, December 27, ten survivors stripped the flesh from the bodies:

They roasted what they needed to eat, and dried the rest for carrying with them. They observed only one last sad propriety: No member of a family touched his own dead. But the strain was scarcely the less for that. For as she sat by the fire Mrs. Foster suddenly realized that spitted upon a stick and broiling over the coals she saw the heart of her cherished younger brother.²⁰

The ordeal of the snowshoers was not over. By January 4, 1847, the human meat had long been exhausted. The men and women took boots and shoes from their own feet and, having crisped them over a fire, made a pretense of an evening meal.

Two of the men were Indian guides. A few of the half-delirious party suggested that these two should be sacrificed and eaten:

The Indian, that skulker by the clearing, that devil of the torture stake, was to them an enemy, a child of Satan, a lower creature. Should not an Indian be killed that a white man might live?²¹

Eddy warned the two guides what the others were up to, and, after a few moments of surprise and disbelief, the Indians disappeared from camp.

After another death and an act of cannibalism, five women and two men remained. Mr. Foster told Eddy that they would have to kill one of the women if the rest of them were to make it through:

Mrs. McCutchen was the one, for she was nothing but a nuisance and could no longer keep up. Eddy, horrified, reminded him that Mrs. McCutchen was a wife and mother, and stoutly vetoed Foster's maniacal scheme. The latter then proposed Mary Graves and Mrs. Fosdick; neither of them was a mother, nor any longer a wife. Eddy again refused, and going back to the company warned them.²²

The two men struggled with a knife, but the women restrained Eddy before he could kill Foster.

By January 10 the snowshoers had trekked out of the great mountain forests, but still there was no food. At length they came across the tracks of the two Indians, which they followed for about a mile. At trail's end lay the guides, completely spent but not yet dead. This time no one had the strength to stop Foster, who killed the Indians by shooting them in the head with his pistol. Foster and the two women of his own family fed upon the remains, but the others refused. At long last, on January 18, the seven survivors were assisted by Indians who led a group of Sacramento Valley ranchers to the rescue.

A few other cases of snow peril survival homicide have been reported. For example, Moriaud recounts a rumor that the survivors of the Greely Arctic expedition (which faced a 250-day winter with only 40 days of rations) shot a German sailor for stealing food and then fed upon his body.²³ But these instances are clearly the exception rather than the rule. Virtually every case of snow peril survival homicide also involves cannibalism. In other words, people are never sacrificed to make the stores of food last longer (by cutting down on the number of mouths), but rather to serve as food. But cannibalism is hardly easy, even under pain of necessity.²⁴ One is moved to recall the contents of the journal of Robert Falcon Scott, preserved after his death on his last Antarctic expedition. Though the explorers were dying of starvation the possibility of cannibalism was never discussed, even though it might well have saved Scott's life because he stopped only two days' journey from the next supply depot.²⁵

Perhaps the best-known instances of survival homicide are the shipwreck or "lifeboat" cases. In a common scenario, an overloaded longboat is adrift on the open seas after the mother vessel has foundered and sunk. The survivors must decide how to ration supplies of food and water and whether some of the group should be tossed overboard (or otherwise put to death) to preserve the lives of the others. The

prospect of rescue is always uncertain; the dangers to existence have an urgent character which often seems to hasten the acceptance of a survival homicide solution.

Even so, killing is infrequent. Much like coal miners, seamen generally try to stick it out together.²⁶ History is replete with examples. To cite an infamous case, William Bligh, captain of the *H.M.S. Bounty* until mutineers set him adrift in a longboat with 18 others, managed to keep himself and all his men alive during a remarkable voyage of 4000 miles across the high seas. Despite desperate thirst and hunger during the two months aboard the open boat, there was never any mention of resorting to survival homicide.²⁷

In more recent times, war hero Eddie Rickenbacker was lost at sea for 23 days with seven other men in November of 1942. They had almost no food or water, but only one man died (he was not cannibalized) after drinking too much seawater.²⁸ Also in November, 1942, the Dutch luxury liner *S.S. Zaandam* was torpedoed by a Nazi U-boat 200 miles off the coast of Brazil. Five men drifted on a raft for 83 days; by catching birds and rainwater, three managed to stay alive until rescue arrived. Two died of starvation and dehydration, but there was no talk of killing one to save the others and the corpses were not cannibalized for food.²⁹

In 1953, 8 men and 2 women were cast adrift in an old whaling vessel named the *Marie Jeanne*, when the boat ran out of gas. After 74 days at sea with few provisions, all had starved to death but two of the men, who were finally rescued by a passing Italian oil tanker. Again there were no incidents of homicide, and no acts of cannibalism.³⁰ Still another case in 1960 involved the rescue by a U.S. Navy team of four Russian sailors after 49 days at sea. Their provision (three cans of dried beef, a loaf of bread, one bottle of vodka, and three canteens of water) were evenly distributed while they lasted. Never was there any question of billing one man to help stretch the meager supplies, nor any talk of cannibalism, even though the mariners were reduced to eating their boots near the end of the ordeal.³¹

Still, a number of survival homicide cases have been reported. One of the most notable was the sinking of the *Essex*.³² On November 20, 1820, the whaleship *Essex* was rammed by a sperm whale with such force that her bow "was stove in" and she sank within minutes. (Melville was so impressed with the tale that he adopted it as the climax for his famous novel *Moby Dick*.)

The few survivors climbed into three small whaleboats, adrift near the equator in the mid-Pacific, thousands of miles from the nearest land. After sailing for a full month the 20 mariners landed on a small island. But food and fresh water were very scarce, and it was estimated that the land could support at most three men. Three decided to remain behind on what is known today as Henderson Island. The rest set off again in the boats, intending to head for the western coast of South America.

The three whaleboats were separated during a sudden squall. One was never heard from again. Another, piloted by First Mate Owen Chase, was rescued on the 91st day at sea by the brig *Indian*, of London – but only after cannibalizing one of their number who had died of starvation shortly after "going mad." (Chase, to whom cannibalism was possible but voluntary death was sacrilege, rejected the pleas of a 17-year-old boy to kill him. Rescue arrived later the same day.)

The third whaleboat, commanded by Captain Pollard, carried six men. The provisions gave out before the first man died. After the same painful soul-searching that had transpired in Chase's boat, the corpse was cannibalized for food. The next man who died was also eaten by his shipmates. Then, according to one account:

Captain Pollard and his three remaining men found themselves in a gruesome dilemma. The human flesh had restored the survivors to life; now, with the supply gone, there seemed to be no immediate prospect of more such food.

They drew lots.

Young Owen Coffin, the cabin boy, got the short one. He was Captain Pollard's nephew, and when the captain saw the boy holding it, he started toward him, crying, "My lad, my lad, if you don't like your lot, I'll shoot the first man that touches you!" The boy hesitated a moment, then lay his head on the gunwale. "I like it as well as any other," he said. Next they drew lots to

see who would fire the gun. Charles Ramsdell, who got the short one, begged Coffin to trade places. Coffin insisted that it was his “right” to die for the remaining three.

“But I can tell you no more!” the captain cried as he recounted the experience a few years later. “My head is on fire at the recollection.

Coffin’s body kept them alive for 10 days. Then the third man died, and Pollard and Ramsdell divided his flesh between them. 12 days later, when the two men were near death from starvation again, they were sighted by the Nantucket whaleship *Dauphin*. In the 96 days since the wreck Captain Pollard and Charles Ramsdell had sailed their whaleboat 4600 miles.³³

Another notable and particularly gruesome instance of shipwreck survival homicide began at ten minutes before midnight on Sunday, March 9, 1942. The Dutch steamer *Rooseboom*, carrying more than 500 evacuees from Malaya, was torpedoed in the Indian Ocean halfway to Ceylon, Walter Gibson survived to write an account of the events which took place in the only lifeboat that got away.³⁴ The small vessel was designed to hold 28 persons but 80 clambered aboard. It held the following provisions: A case of “bully beef,” two seven-pound cans of fried spiced rice, 48 cans of condensed milk, and six quarts of fresh water.

The first death came on the first day. A young soldier, doing a stint in the water to “lessen the rigors of overcrowding,” was stung by a sea creature and died in agony. The next day, a group of 20 men built a raft of flotsam to tow behind the lifeboat, but it sank two feet underwater when they all climbed on. Within three days the twenty were dead. Many others killed themselves by jumping overboard.³⁵ Much like the commander in the fictional story *Marooned*, this behavior may perhaps be termed “survival suicide,” despite the apparent inherent contradiction.

One night during a sudden storm there was an unusual amount of screaming and shouting. The next morning 20 people were missing. Gibson and others began to notice a group of five men who sat huddled together near the bow, speaking in whispers and glancing furtively about. The survivors soon began to suspect that the five soldiers in the bow seats had formed a murder gang.

After the 7th day the last bottle of water ran out. The murder gang came out into the open, executing fellow passengers with impudence. Their purpose, if any logic motivated them, perhaps was to make the limited food supplies last longer. (There was no cannibalism.) Offended by the “unauthorized” homicides, Gibson and others prepared a counterattack:

When darkness came MacKenzie moved about among the others, then told me that he had 14 men ready to deal with the murder gang. We moved down the boat, converging on the five men. One tough shouted, “Here they come!” and pulled out a bottle. Drummer Hardy of the *Argyllis* sprang forward. The bottle crashed down on his head. Two of the murder gang grabbed him and pushed him overboard. Then we were at their throats. We struggled and rolled, wrestling at the bottom of the boat.

We did not seem to put them overboard one by one so much as to rush them over in a body. Three got their hands to the gunwale and tried to drag themselves back. Relentlessly we battered at their fingers with the rowlocks...³⁶

2.2 Survival Homicide in Space

Disasters in space will partake of a uniquely dangerous character that must necessarily distinguish them from the various classes of survival homicide situations mentioned above. It is easy to see why. Trapped submarine crews, for instance, have the hops of floating or swimming to the surface for air if only the hatches can be pried open and pressures equalized. In mine disasters, full rescue provisions (air, water, and food) are never more than a few thousand feet away, if only the tons of solid rock can be cleared away in time. Snow peril victims have unlimited air and water, and food is frequently available in

limited quantities from local flora and fauna if one knows where to look and what is edible. People stranded in crowded lifeboats have plenty of air to breathe, and, if they have fairly simple equipment on board, can distill fresh water from the sea and catch fish and passing birds for food.

Space disasters, on the other hand, must inevitably be of a distinctly different character. Air, taken for granted in most earthboard survival situations, will be in strictly limited supply. Water too cannot indefinitely be recycled or purified if equipment damage has been extensive during the disaster event, and food will likewise be in very short supply. The point is that in space, unlike on Earth, it is virtually impossible for people to “live off the land” until help arrives.

An important additional factor is the tremendous distance encountered in near-space and outer space transportation. While rescue crews must travel from thousands of feet (mines) to perhaps as much as hundreds of miles (shipwrecks), rescue distances in space may involve *hundreds of thousands or millions of miles!* Even when help is closer, such as in cases of disasters on orbital facilities (rescue comes from Earth, only 100-1000 miles away) or on the lunar surface (rescue for a disabled Moon colony might come from another colony located elsewhere on the lunar surface, 10-1000 miles away), the expense of rescue, perhaps measured in dollars/person, will be vastly greater than any comparable effort mounted on Earth.

The cumulative effect of these two factors – hostile environment plus relative difficulty of rescue – must be to increase the physical and psychological isolation of the victims of the disaster. Also, since the performance of rockets, purifiers, and air tanks are well-known and easily calculable, the trapped astronauts will be able to determine the exact number of man-hours of life remaining to the survivors, with a precision denied shipwreck, snow peril, and other disaster victims.³⁷ The author is of the opinion that this mathematical certainty, coupled with the relative isolation of the victims, may make survival homicide an accepted procedure – perhaps even a commonplace one – in space disaster situations in the future.³⁸

3. Criminal Jurisdiction in Space

When a space disaster occurs and the crew or passengers resort to survival homicide to stay alive, who will have criminal jurisdiction to adjudicate the legality of their conduct? Who has the authority to prescribe the law applicable in such cases? In other words, where does subject matter jurisdiction lie?

To start out with, Article VIII of the Outer Space Treaty³⁹ clearly specifies:

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body.

This appears to confer upon the State of registry the right to retain full criminal jurisdiction and control over the activities of personnel on board all space objects. The clause “while in outer space or on a celestial body” seems broad enough to include incidents of survival homicide that take place on space vehicles (Apollo, Soyuz, Space Shuttle), permanent or semi-permanent orbital facilities (Skylab, space factories, Gerard O’Neill’s “space colonies”), lander vehicles on the Moon’s surface (Lunar Excursion Module or “LEM” of the Apollo series), permanent or semipermanent lunar facilities (Moon bases, colonies, farside observatories), or installations on other celestial bodies in our solar system (Mars colony, asteroid cities, Titan survey base).

One remote problem that might conceivably arise is whether facilities constructed with extraterrestrial materials (e.g., moon rocks) are “space objects” under the terms of the Treaty, since they were never “launched into outer space.” There may also be some question as to whether the term “personnel” includes passengers and stowaways as well as crew,⁴⁰ but the fact that passengers, visitors

and unauthorized people might not be regarded as “personnel” does not necessarily deprive the State of registry jurisdiction over them.⁴¹

If the disaster-struck space vehicle or installation has a multinational registry, the States involved can generally be expected to have drawn up an agreement which specifies the rights and responsibilities of each State Party in the event of mishap. For example, the multilateral agreement between the U.S. and the European members of ESRO (European Space Research Organization) pertains to the cooperative Spacelab program.⁴² Article 11 provides:

The Government of the United States of America shall have full responsibility for damage to its nationals...arising in the course of implementation of this Agreement. The European Partners shall have full responsibility for damage to their nationals...and, through ESRO, to employees of ESRO...arising in the course of implementation of this Agreement.

What if the survival homicide situation arises in a vehicle or facility having a multinational crew, in the absence of an agreement such as the above? International law is much less settled on this point.

First we consider Article VII of the Outer Space Treaty, which is as follows:

Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the moon and other celestial bodies.

It is difficult to see how a launching State could possibly live up to its international obligations⁴³ unless it was entitled to exercise jurisdiction over the parties involved, especially criminal jurisdiction. In other words, international liability is inconsistent with a lack of jurisdiction.

The Convention on International Liability for Damage Caused by Space Objects⁴⁴ expands upon the international obligations of launching States as suggested in Article VII of the Outer Space Treaty. In Article III of the Convention we find:

In the event of damage being caused elsewhere than on the surface of the earth to a space object or one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible.

Note that the phrase “any personnel thereof” in the Outer Space Treaty here expanded to “persons,” apparently broader language. This would seem to extend the liability of the launching State to passengers and stowaways as well as crew. But then, in Article VII of the Convention we have the following:

The provisions of this Convention shall not apply to damage caused by a space object of a launching State to:

- (a) Nationals of that launching State;
- (b) Foreign nationals during such time as they are participating in the operation of that space object from the time of its launching or at any stage thereafter until its descent, or during such time as they are in the immediate vicinity of a planned launching or recovery area as the result of an invitation by that launching State.

This apparently has the effect of eliminating liability under the Convention, both as regards nationals of the launching State and for “foreign” crew members who are “participating in the operation” of the

damaging space object. Nevertheless, it is reasonable to assume that the cumulative effect of the three foregoing Articles is to impose international liability for damages upon the launching State, and thus by implication criminal jurisdiction as well.

Of course, under Article VIII of the Outer Space Treaty it is the State of *registry* that retains jurisdiction over criminal acts aboard space objects, not the *launching* State. The two may not be the same governmental entity. In such a case, as where NASA launches a German manned space capsule from Cape Canaveral, the most probable result is that the two interested States have concurrent jurisdiction to prescribe criminal laws relating to acts of survival homicide in space.

Another pertinent treaty provision is Article VI of the Outer Space Treaty, which says:

States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.

These provisions of the Outer Space Treaty make States liable for the acts of non-governmental entities under their control, during their stay in space. Thus, civil spacecraft or extraterrestrial facilities under individual⁴⁵ or corporate⁴⁶ ownership and control will be subject to the jurisdiction of the State of nationality or the State of incorporation, as the case may be.⁴⁷ This conclusion follows directly from the explicit requirement in Article VI that non-governmental entities must receive “authorization and continuing supervision by the appropriate State Party.” This requirement plainly cannot be met satisfactorily unless the State Party retains criminal prescriptive jurisdiction.⁴⁸

Customary international practice is another source of international law, in addition to treaties. There are two primary bases for jurisdiction that are generally accepted by all nations on Earth: Territoriality and nationality.

Territory is basic to State sovereignty – a State cannot exist without territory, and each State may exercise full jurisdiction over all of its territory. “Situs of offense” is the critical test for territorial jurisdiction. The concept of “territory” customarily extends to “fictional territories” as well, including embassies, sea vessels or aircraft having a national character, and vessels of war.⁴⁹ It is frequently argued that a spacecraft similarly should be considered as a “flying piece of territory” of the sovereign whose flag it flies, although not all jurists agree with this view.

Nationality is another oft-invoked principle of jurisdiction. On this basis, many States will claim jurisdictional competence over their nationals who commit crimes outside of the “territory” of the State. The jurisdictional test here is “nationality of actor.” According to one writer: “The nations now engaged in outer space activities have indicated that the country of nationality would normally have sole jurisdiction over its astronauts.”⁵⁰

A number of other bases for jurisdiction have been asserted from time to time, with varying degrees of success and acceptance by the international community. For example, “protective principle” and “impact territorially” jurisdiction are occasionally invoked in cases where a substantial, genuine national interest is threatened.⁵¹ The test is “injury of national interest.” Under either of the two principles a State may punish an offender who commits a crime outside of the State if the crime adversely affects people or property within the State. (Counterfeiting and passport fraud are typical examples.) Theoretically, if a foreign astronaut crewing aboard a United State spacecraft were to commit survival homicide on an American astronaut while the two of them were “space walking” outside the vehicle itself, the U.S. might try to assert protective principle jurisdiction over the foreigner.

Another possible basis is “universality.” This is recognized by most States, and grants criminal prescriptive jurisdiction to any nation able to get personal jurisdiction over an actor who commits international crimes or “crimes against humanity.” By resorting to this method States have claimed jurisdiction regarding certain offenses which may have been committed by any person anywhere in the world. (Genocide, slave trading, piracy, acts of violence against diplomats, and sabotage of civil aircraft are typical examples.⁵²) Perhaps a survival homicide committed by a space terrorist following an act of sabotage or attempted piracy aboard a spacecraft would give any State “valid subject matter jurisdiction over the act.

States have also claimed competence on the basis of such criteria as the State of embarkation or debarkation, the State where the craft last took off prior to commission of crime or where first landed after commission of the crime, and so forth with respect for crimes committed on aircraft in flight over international waters.⁵³ But “passive personality” jurisdiction – where the test is “nationality of victim” – is of highly disputed validity in international law.

So we see that there are many possible sources of criminal jurisdiction under existing international law. Article VIII of the Outer Space Treaty would appear to be self-executing, and need not await further internal State legislative action to be put into effect in the United States.⁵⁴ In the U.S., the language of the Supremacy Clause in the national Constitution⁵⁵ has been interpreted by the courts to allow treaties, concluded by the President with two-thirds of the Senate concurring, to take effect internally *ex proprio vigore*.⁵⁶

This, however, is a matter in which the courts are the final arbiters, and there is no case law directly on point (regarding the Outer Space Treaty). In the event that American courts decide that the Outer Space Treaty is not self-executing, and that the further authority from treaties and customary international law cited above is neither controlling nor persuasive, internal legislative and judicial authority must be found to support the criminal jurisdiction of the United States in space in situations involving survival homicide.

First of all,⁵⁷ the Uniform Code of Military Justice⁵⁸ is widely believed clearly to apply to all “members of a regular component of the armed forces” of the U.S.,⁵⁹ “in all places.”⁶⁰ This should be broad enough to cover the crime of survival homicide in outer space, in a spacecraft or orbital facility, or on a celestial body if perpetrated by military personnel of the United States.⁶¹

As for civilians, a long series of Supreme Court decisions has made it quite clear that such persons cannot, at least in peacetime, constitutionally be subjected to a U.S. military court-martial so as to deprive them of the right to trial by jury and other procedural rights.⁶² That is, nonmilitary personnel generally are not subject to the Uniform Code of Military Justice, at least for important crimes such as homicide. And since most court cases involved crimes by civilians actually employed by or dependents of American servicemen stationed abroad, this reasoning would carry even stronger weight with regard to U.S. civilians who have no relationship whatsoever with the military.

Another approach to criminal activities which Congress has seen fit to adopt by statute relates to acts falling within the “special maritime and territorial jurisdiction of the United States.”⁶³ This “special jurisdiction” relates to American ships in interstate state or foreign waters, or on the high seas; federal lands within the several states; guano islands appertaining to the U.S.; and, more recently, American aircraft in flight over interstate or foreign waters, or over the high seas.⁶⁴ And Congress regularly legislates for territories and possessions of the United States, both those over which the U.S. claims sovereignty and those over which the U.S. exercises complete control under no claim of sovereignty.⁶⁵

After defining the “special maritime and territorial jurisdiction of the United States,” Title 18 in other sections provides that certain specific acts committed within this special jurisdiction shall be considered federal crimes. These acts include murder,⁶⁶ manslaughter,⁶⁷ and attempts to commit murder or manslaughter.⁶⁸ This is not to imply that outer space or celestial bodies fall within this special jurisdiction. Courts have traditionally construed the meaning of the provisions very strictly. As originally enacted in 1948, Title 18 did not mention aircraft, and in 1950 the federal District Court in New York dismissed a case involving an assault committed aboard an American aircraft while in flight over

international waters, for want of prescriptive jurisdiction.⁶⁹ This decision led directly to a 1952 amendment of the statute, adding a new paragraph (5) as follows:

Any aircraft belonging in whole or in part to the United States, or any citizen thereof, or to any corporation created by or under the laws of the United States, or any State, Territory, district, or possession thereof, while such aircraft is in flight over the high seas, or over any other waters within the admiralty and maritime jurisdiction of the United States and out of the jurisdiction of any particular State.

To cover flights into outer space, Congress may need further to amend Title 18 to give U.S. courts unambiguous jurisdiction in extraterrestrial locales. Jurisdiction then would clearly extend to survival homicides committed in space. Alternatively, there already exist numerous federal criminal statutes designed to deal with certain harmful activities wherever conducted. These include such conduct as treason, espionage, defrauding the government, draft evasion, income tax evasion, counterfeiting, and perjury, even when committed extraterritorially.⁷⁰ Congress does not lack the power to prescribe similar criminal statutes regulating conduct in space by Americans.⁷¹

Yet another, more general approach would be for Congress to vest plenary authority in the Executive over all American activities on the Moon and other celestial bodies. This would parallel the authority now vested in the President over the trust territories and Palmyra, Midway, and Wake Island. Such an approach would permit the formulation of regulations governing both civil and criminal acts in space, in the name of the President, perhaps effective upon publication in the *Federal Register*. No claim of U.S. sovereignty would be involved, so there would be no conflict with international law on the matter.⁷²

4. Ethics and Legality of Survival Homicide in Space

Assuming that survival homicide situations can and will arise in the context of space exploration and exploitation, and that individual nations may claim prescriptive criminal jurisdiction over the activities of their own astronauts, what about the ethics of such acts? Do we really want to excuse murder on grounds of extreme necessity? Is recourse to homicide in survival situations legally and morally proper?

Before addressing these difficult questions, a brief quotation from Fuller's article "The Case of the Speluncean Explorers" will help to put matters into proper perspective:

The usual conditions of human existence incline us to think of human life as an absolute value, not to be sacrificed under any circumstances. There is much that is fictitious about this conception even when it is applied to the ordinary relations of society. Every highway, every tunnel involves a risk to human life. [We] can calculate with some precision how many deaths the construction of them will require; statisticians can tell you the average cost in human lives of a thousand miles of four-lane concrete highway. Yet we deliberately and knowingly incur and pay this; cost on the assumption that the values obtained for those who survive outweigh the loss.⁷³

There are many examples in everyday life where the lives of a few are traded for those of the many. For instance, in 1973 in the United States there were 55,800 deaths in motor vehicle accidents alone.⁷⁴ State traffic authorities estimate that in 1973 the Mileage Death Rate was 4.3 persons per 100,000 vehicle-miles. This means that people found acceptable one death for every 23,300 miles driven. Since there were 122,400,000 American automobile drivers in 1973,⁷⁵ the statistics indicate that, as a society, we were willing to sacrifice 1 human being for the mere convenience of 2190 others. Surely if

we are happy to kill one man for the mere *comfort* of 2190 others, we would also be willing to permit the sacrifice of one man to save the *lives* of a much smaller number than 2190.

While it may be reasonable from a public policy point of view that one should be sacrificed so that others may live, the question remains any individual has the ethical and legal right to take the life of another human being in order to save himself when a state of necessity exists. Taking each human life as an integer of equal value, Shuchman defines the “state of necessity” as coming into being whenever the following three conditions arise:

- (1) The lives are limited to a given situation in time and place.
- (2) It appears inevitable that during the situation some – if not all – of the lives will be lost.
- (3) There is a relation of dependency between the lives such that some can live only if others die. Some lives can be preserved only by the utilization (i.e., the destruction) of the others.⁷⁶

In other words, we are dealing with an imperative situation in which no act is effectively an act, no decision is effectively a decision, and in which a “zero-sum game”⁷⁷ is played.

From the standpoint of ethics, the Christian Bible is equivocal on the issue of survival homicide. The command in Leviticus 19:15 that you shall not “stand by idly while your neighbor’s life is at stake” is sometimes interpreted to establish an affirmative duty to save and protect any person in physical danger. This may be considered hostile to the idea of survival homicide,⁷⁸ but there is no consensus on the matter. The tale of Jonah, a man who is thrown overboard to save a ship after drawing the unlucky lot, provides at least tacit divine support for the principle of sacrifice.⁷⁹

Consider the related situation of trespassers in fallout shelters. Some moralists would urge that one has a moral right to prevent his less fortunate or less foresighted neighbors from entering the limited fallout shelter facility, and that a moral *duty* may exist to use sufficient force – up to and including homicide – to protect one’s own person and family. For it is felt that “there is no obligation for us to choose that all should die together because not all can survive.”⁸⁰ Others insist that it is “utterly immoral to talk about using guns to drive neighbors away from a family fallout shelter.”⁸¹ As Shuchman correctly points out: “The several versions of the Christian ethic as applied in the fallout shelter problem make it fairly clear that for resolving the problem of necessity, the Christian ethic means all things to all men.”⁸²

The Talmud, the main source of Jewish civil and religious law, seems not to favor the survival homicide solution. Rather than take an innocent life, according to this view, if there are no volunteers (for survival suicide) then it is best that all should perish together.⁸³ The Talmudic illustration is that of two men in the desert with water enough for only one to survive. If both drink, both must die; but if only one drinks, he will probably reach safety.⁸⁴

One widely accepted commentary on this problem by Ben Patura is to the effect that both should share the water equally and both should perish: “It is better that both should die, rather than one should behold his companion’s death.”⁸⁵ However, as with the Christian ethic, there is some dissent. Most notable are the writings of the Hebrew scholar Ahad Haam, who believed that in situations where only one of two persons can be saved, it is the moral duty of each to overcome the feeling of mercy and save a life. As to the question of *which* life, Ahad Haam contends that every man’s life is entrusted to his own keeping, and that to preserve one’s own life is a higher duty than the duty to save a neighbor’s life.⁸⁶

Many notable legal writers and philosophers have wrestled with the problem of survival homicide from time to time. John Duke Coleridge, appointed Lord Chief Justice of England in 1880, comes down against the legality of such acts. In the famous English case *Regina v. Dudley & Stephens* (see *infra*), Coleridge remarks that:

It must not be supposed that in refusing to admit temptation to be an excuse for crime it is forgotten how terrible the temptation was; how awful the suffering; how hard in such trials to keep the judgement straight and conduct pure. We are often compelled to set up

standards we cannot reach ourselves and to lay down rules which we could not ourselves satisfy. But a man has no right to declare temptation to be an excuse, though he might himself have yielded to it, nor allow compassion for the criminal to change or weaken in any manner the legal definition of the crime.⁸⁷

In a famous passage written and delivered in 1928, Benjamin Nathan Cardozo, one of the greatest American jurists and a Supreme Court Justice, in essence ratified Coleridge's position regarding the ethics and legality of survival homicide:

Where two or more are overtaken by a common disaster, there is no right on the part of one to save the lives of some by the killing of another. There is no rule of human jettison. Men there will often be who, when told that their going will be the salvation of the remnant, will choose the nobler part and make the plunge into the waters. In that supreme moment the darkness for them will be illumined by the thought that those behind will ride to safety. If none of such mold are found aboard the ship, or too few to save the others, the human freight must be left to meet the chances of the waters. Who shall choose in such an hour between the victims and the saved? Who shall know when masts and sails of rescue may emerge out of the fog?⁸⁸

What about the other side of the coin? Aristotle's analysis, while not directly on point, concludes with the view that some acts which are chosen by necessity as the lesser of two evils forced upon a man should be pardonable.⁸⁹ But the ancient philosopher's illustration is the jettison of cargo in order to save one's life on an overburdened ship,⁹⁰ which is a generally accepted viewpoint.⁹¹

Thomas Hobbes believed that punishment aimed at deterrence in situations of necessity was useless. He put forth an essentially utilitarian notion of justification:

A man would reason thus. 'If I do it not, I die presently; if I do it, I die afterwards; therefore, by doing it, there is time of life gained.' Nature therefore compells him to the act.⁹²

Hobbes' position is that an actor in a state of necessity should be totally excused, for no law can reasonably oblige a man to abandon his own preservation.⁹³

Other writers,⁹⁴ Jeremy Bentham⁹⁵ and Oliver Wendell Holmes⁹⁶ among them, seem to accept the fundamental tenet that men will always choose to live even though they must kill innocent persons to save their own lives. If this is true, then there is little point in meting out punishment in survival homicide situations except for purposes of retribution or revenge.⁹⁷ The German philosopher Immanuel Kant also accepted Hobbes' view, but thought the wrongdoer should still suffer ethical condemnation.⁹⁸ Still others would argue that a numerical preponderance in the lives saved compared to those sacrificed should establish an ethical and legal justification for the act in cases of extreme necessity.⁹⁹

Before delving into the applicable case law and statutory authority relevant to the excusability of survival homicide in space, it should be pointed out that the doctrine of necessity has been recognized as a valid common law defense for a wide variety of offenses. These include civil insurrection;¹⁰⁰ commission of treason;¹⁰¹ mutiny on board an unseaworthy vessel;¹⁰² mutiny where submission to the authority of the master would have resulted in grave bodily harm to one or more persons;¹⁰³ violation of embargo laws during hostilities just short of war;¹⁰⁴ breaking out of a prison which is on fire through no fault of the escapee;¹⁰⁵ prison break to obtain life-or-death medical care;¹⁰⁶ performance of an abortion by a doctor to save the mother's life;¹⁰⁷ furnishing alcoholic medication without a prescription during an emergency;¹⁰⁸ violation of speed laws in an attempt to apprehend a felon;¹⁰⁹ stopping an automobile at a place where stopping is prohibited, when caught in a traffic jam;¹¹⁰ failure to provide separate coaches for white and "colored" passengers when required to provide transportation;¹¹¹ and killing a moose out of season and without a license, when necessary for the protection of ranch property.¹¹² Marchand lists a

number of similar European cases, including the unlawful practice of medicine, violation of the rules of sea navigation, and the slaughter of domestic animals¹¹³ – all justified under the doctrine of necessity according to the courts.

4.1 Case Law on Survival Homicide

The existing case law on the defense of necessity in survival homicide situations is very sparse. There are only a few major cases known in the many centuries of Anglo-American jurisprudential history. Each of these involves a shipwreck-and-lifeboat scenario, and only two of these ever made it to actual trial.

The first case, reported by Pufendorf,¹¹⁴ has been traced back to a Dutch writer in the seventeenth century who mentioned the incident solely for its medical interest.¹¹⁵ It appears that a group of English sailors were driven out to sea from St. Kitt's, one of the then newly-founded colonies in Leeward Islands of the West Indies, by a sudden storm. After 11 days at sea their meager supplies of food and water were exhausted. The men drew lots and put to death the person upon whom the lot fell. (The victim is said to have "made a speech" thanking the others for allowing him to save them.) With the victim's flesh and blood the starving mariners survived their famished and dehydrated condition long enough to achieve landfall. Upon returning to St. Kitt's, the survivors apparently were arrested but then pardoned by the Governor of the colony before the case could be taken to trial.

The second case occurred in about 1816, when the 28 survivors of the foundering ship *Medusa* were cast adrift in a small lifeboat. By the end of the first week it became clear that only 15 persons would be able to last more than a few more days – the others had become "sick and maniacal." Still, all participated in the rationing of wine, but there was no food to be had. The 15 held a council, and it was felt that the sick should be placed on half rations of wine (which would hasten death) or else be completely deprived of all rations. After long deliberation it was decided to throw the sick into the sea, which was then done, as a direct result of which the remaining 15 gained nearly a week of life during which they were rescued. Again, as in Pufendorf's case, the case never got to trial apparently because local magistrates were unwilling to bring charges against those whose "suffering inspired pity."¹¹⁶

The third case, the famous *United States v. Holmes*,¹¹⁷ was brought to trial and successfully prosecuted through to sentencing.¹¹⁸ Holmes was tried before a federal Circuit Court judge in April, 1842, and the results of his case are today the controlling authority in the United States. Much of the judge's opinion is mere dictum, but state courts and commentators have relied on it consistently ever since, giving it at least the force of very persuasive doctrine.¹¹⁹

The American ship *William Brown* departed Liverpool on March 13, 1841, bound for Philadelphia in the United States. She carried a heavy cargo, 18 crew, and 64 passengers. At about 10 PM on April 19, the ship struck an iceberg off the coast of Newfoundland and sank in about 90 minutes. The jolly-boat and the long-boat had been lowered into the water during this time. In the jolly-boat were the Captain, the second mate, 7 of the crew and 1 passenger. The remainder of the crew and 32 passengers, 41 persons in all, crowded into the long-boat. The remaining 31 passengers drowned.

From the later depositions of the Captain and the second mate, when the two boats parted company on the morning of April 20 (Tuesday) the longboat and all aboard were in serious danger:

The gunwale was within 5 to 12 inches of the water. "From the experience" which they had had, they thought "the long-boat was too unmanageable to be saved." If she had been what, in marine phrase, is called a "leaky boat," she must have gone down. Even without a leak she would not have supported one-half her company, had there been "a moderate blow." "She would have swamped very quickly." The people were half naked, and were "all crowded up together like sheep in a pen." "A very little irregularity in the

stowage would have capsized the long-boat.” “If she had struck any piece of ice she would inevitably have gone down.”¹²⁰

All day Tuesday it rained and the long-boat leaked, but the passengers bailed furiously with buckets, tins, and whatever else was at hand. The crew took turns rowing, at intervals. Late Tuesday night, the rain began falling “rather heavily” and the wind came up, splashing water over the bow and into the tossing craft. The bottom plug came out suddenly, and the passengers panicked as the boat slowly started to fill with water. The first mate, who had been left in charge of the long-boat by the Captain, ordered the crew to begin throwing passengers overboard to lighten the vessel. The mate directed that no women should be ejected (although two were, by their own choice), and that they were “not to part man and wife.” There was no other principle of selection. By the time the night was ended, 14 male passengers and two females had been flung over the side.

No lots were cast, nor were the passengers consulted at any time. Holmes was a member of the crew who assisted in the dirty job. On the fateful night, after casting out several others, Holmes came to Francis Askin (for whose manslaughter he was later indicted). According to the record:

When laid hold of, he offered Holmes five sovereigns to spare his life till morning, “when,” said he, “if God don’t send us some help, we’ll draw lots, and if the lot falls on me, I’ll go over like a man.” Holmes said, “I don’t want your money, Frank,” and put him overboard.¹²¹

On Wednesday morning, the weather cleared and the long-boat was sighted by the ship *Crescent*. Everyone who had avoided being thrown out the night before thus was saved. Upon arrival at the port of Philadelphia, Holmes was taken into federal custody. (He was the only one among the crew on the long-boat who could be found and brought to trial.) The Grand Jury refused to return an indictment for murder, so he was charged with a single count of manslaughter.

After all the evidence had been presented, the jury was instructed by Judge Baldwin that the “law of necessity” will in some cases excuse a positive act resulting in death. However, there were several essential legal requirements that had to be met:

But the case does not become “a case of necessity,” unless all ordinary means of self preservation have been exhausted. The peril must be instant, overwhelming, leaving no alternative but to lose our own life, or to take the life of another person.¹²²

Furthermore, if the danger is inevitable but is not *imminent*, lots must be drawn legally to select a victim for survival homicide purposes:

If the source of danger have been obvious, and destruction ascertained to be certainly about to arrive, though at a future time, there should be consultation and some mode of selection fixed, by which those in equal relations may have equal chance for their life. By what mode, then, should selection be made?...When the ship is in no danger of sinking, but all sustenance is exhausted, and a sacrifice of one person is necessary to appease the hunger of others, the selection is by lot. This mode is resorted to as the fairest mode, and, in some sort, as an appeal to God for selection of the victim.¹²³ ...When the selection has been made by lots, the victim yields of course to his fate, or, if he resist, force may be employed to coerce submission.¹²⁴

Although most of the above is gratuitous judicial dictum, it is generally viewed as having strong persuasive value.

As Shuchman has noted, there are a number of problems inherent in the concept of drawing lots. A few of these include the following:

- (1) Given the assent of the victim, are his killers guilty of any crime such that punishment should be visited upon them?
- (2) Does the proposed victim, chosen by lot, still have the right to self-defense if, for example, he changes his mind about the lottery after having been selected?
- (3) If in self-defense, the loser of the lottery kills his attacker, would he be guilty of murder or be excused because he acted in self-defense?
- (4) Could the others kill those who refused to participate in the lottery?¹²⁵

It may be argued that the loser of a lottery, whether or not he participated, should be forcibly thrown overboard because his refusal to go peaceably threatens the lives of all the others. In other words, the effect of the lottery is to convert the question from whether all shall die to whether some shall live.

Furthermore, if necessity *justifies* survival homicide, then resistance by way of self-defense is generally not permissible (by analogy with more common forms of justification, such as the lawful taking of life by an executioner). But if necessity is only an *excuse* which the criminal actor may raise in his defense, the self-defense by the intended victim is probably permissible even if this leads to the death of the attacker.¹²⁶ As Williams suggests, two persons may be engaged in a struggle to kill each other without either having committed a crime.¹²⁷ The one acts under necessity which justifies homicide, while the other acts in self-defense, unaware of the existence of the necessity (so his acts are not unlawful since he has no criminal intent).¹²⁸

Getting back to the *Holmes* case, if the danger *is* imminent and there is no time for consultation, then lots need not be drawn. In Judge Baldwin's words:

If, indeed, the peril be instant and overwhelming, leaving no chance of means, and no moment for deliberation, then, of course, there is no power to consult, to cast lots, or in any such was to decide; but even where the final disaster is thus sudden, if it have been foreseen as certainly about to arrive, ... if time have existed to cast lots, and to select the victims, then, as we have said, sortition should be adopted.¹²⁹

Up to this point in the charge to the jury, Holmes would probably have been acquitted on the facts before the court. The passengers and crew had been kept too busy on April 20, bailing and rowing, to worry about lots, and when the danger suddenly struck that night there was no opportunity for consultations or "sortition." But then the judge stated that there was one exception to the general "law of necessity" – that it applies only among people who stand "in equal relations."

In other words, in cases of imminent and deadly peril, the "law of necessity" will only justify a killing by one owing no special duty to the victim. It will not justify a killing by one who owes a duty to subordinate his own safety to that of the person killed.¹³⁰ Such a duty is owed by a seaman to a passenger,¹³¹ explained Judge Baldwin, but not as between seaman and seaman or between passenger and passenger.¹³² Since Holmes was a member of the crew, he therefore owed a duty to subordinate his own life to the life of Francis Askin, a passenger. Since he did not meet this duty, Holmes was found guilty by the jury and was sentenced to six months hard labor and to pay a fine of \$20.

The fourth and final case in Anglo-American jurisprudence involving the issue of survival homicide is *Regina v. Dudley & Stephens*,¹³³ an English case. This is the only recognized British authority on the subject of survival homicide. The facts are as follows.¹³⁴

On May 19, 1884, the 19-ton private sailing yacht *Mignonette* set course for Sydney, Australia out of Southampton. The vessel carried four crewmen: Thomas Dudley, 31, the captain; Edward Stephens, 36, the mate; Edmond Brooks, 38, seaman; and Richard Parker, about 17, who had signed on as cabin boy and apprentice seaman.

In the South Atlantic, poor weather forced the ship out of the normal shipping lanes. On July 5, large waves suddenly struck the yacht "and stove in her side." The vessel sank in less than five minutes, and the four crewmen barely got away in the 13-foot lifeboat. Some navigational equipment was rescued

at the last minute by Dudley, but in the rush the only food recovered was two one-pound cans of turnips. The tiny boat was now adrift about 1600 miles from Africa and 2100 miles from Rio de Janeiro, Brazil. A makeshift sail was rigged with torn clothing, and they steered for South America. They waited three days before opening the turnips. On the fourth day they caught, a small turtle, which they made to last (as food) until the twelfth day. Thereafter they had no food or drink, and sighted no other vessels. Parker became ill from drinking seawater on the sixteenth day.

At this point, one of the men proposed that one of the four should be sacrificed to save the others. The idea of drawing lots was mentioned, but was not agreed to. (Brooks had dissented, saying that “he did not wish to kill anybody, and did not wish anybody to kill him.”) On the eighteenth day, the fifth without food, Dudley suggested that Parker be sacrificed to save the others. At this point, Parker was very sick and could not take part in the discussions. On the nineteenth day, Dudley and Stephens agreed to kill Parker if they were not rescued by the next morning.

At 6 AM On the morning of July 25, the twentieth day, Dudley climbed to the bow of the boat and slit Parker’s throat with a two-inch penknife. The captain caught most of the boy’s blood in the bailer. Brooks, who had fainted at the sight, now asked for a share, and Dudley passed him the bailer. The blood was thick, partially congealed, and hard to swallow. Next, the cabin boy’s liver was cut out, and the three men feasted upon it. For four more days they lived on Parker’s remains, until finally, on July 29, the lifeboat was boarded by rescuers from the German bark *Montezuma*. (It was later determined by competent experts that the three survivors would certainly have died had they not eaten Parker’s body.)

Upon arriving in Falmouth on September 6, Dudley told the entire story to the customs officials in the presence of the Harbor Police. To his surprise, he was promptly arrested. The next day all three men appeared before the Falmouth Police Court and were charged with murder. The courtroom was packed with spectators, including Parker’s brother. The prosecutor, noting that his weakest case was against Brooks (who had not taken part in the murder plan), dropped the charges against him in return for his testimony at trial.

After trial, the jury was allowed to bring back a “special verdict,” which permitted the court above (the Queen’s Bench) to examine both procedural and substantive aspects of the case on review. The opinion of the Court, written by Lord Chief Justice Coleridge, argues that there exists no “law of necessity” capable of justifying homicide except for the law of self-defense. Said the Chief Justice:

Now it is admitted that the deliberate killing of this unoffending and unresisting boy was clearly murder, unless the killing can be justified by some well-recognized excuse admitted by the law. It is further admitted that there was in this case no such excuse, unless the killing was justified by what has been called “necessity.1 But the temptation to the act which existed here was not what the law has ever called necessity....To preserve one’s life is generally speaking a duty, but it may be the plainest and the highest duty to sacrifice it. The duty, in case of shipwreck, of a captain to his crew, of the crew to the passengers, or soldiers to women and children...imposes on men the moral necessity, not of the preservation, but of the sacrifice of their lives for others. It is not needful to point out the awful danger of admitting the principle which has been contended for. Who is to be the judge of this sort of necessity? By what measure is the comparative value of lives to be measured? Is it to be strength, or intellect, or what? It is plain that the principle leaves to him who is to profit by it to determine the necessity which will justify him in deliberately taking another’s life to save his own. In this case the weakest, the youngest, the most unresisting, was chosen. Was it more necessary to kill him than one of the grown men? The answer must be “No.”¹³⁵

The Court then proceeded to pass a sentence of death upon the two defendants. Later, the sentence was partially commuted to six months’ imprisonment by the Crown.

It has been argued that *Regina v. Dudley & Stephens* is not sound law. As Mallin has pointed out:

This was in fact a case of first impression. As such, it required a rule of judge-made law which in theory would be arrived at by adversary adjudication. Victorian juries customarily convicted in hardship cases, confident of royal reprieve. By removing the genuineness of the threat to Dudley and Stephens through the royal prerogative system, the judges felt themselves freer than they might otherwise have been to decide the case on abstract rather than human – or even realistic – considerations....The important conclusion is that had Dudley and Stephens' lives really been in the balance, adjudication might have produced quite different results.¹³⁶

It is interesting to note, however, that had Dudley and Stephens been tried in an American court the result would have been no different. Even under the more liberal *Holmes* test the seamen probably would have been convicted, since no danger was imminent on the twentieth day and the men did not draw lots. So both authorities reach the same result on the same facts, but through different reasoning processes. The author and others¹³⁷ are of the opinion that the American precedent is the “better” and more humane law, appealing more to the hard realities of human nature rather than to the lofty declarations of a distant and abstract Law.¹³⁸

In situations involving disasters in space where acts of survival homicide are committed upon some that others may live, *Holmes* is the controlling case law respecting crimes falling under American jurisdiction.

4.2 Statutory Authority for Survival Homicide

The “law of necessity” is recognized in many countries around the world as a valid justification for murder.¹³⁹ In a French court, Dudley and Stephens probably would have been acquitted on the excuse either of *l'état de necessite* or of *contrainte morale irresistible*. A similar result would most likely follow under German law:

§39. Necessity Which Justifies.

(1) Anybody who commits an act in the event of an imminent and otherwise unavoidable danger to life, limb, freedom, honor, property or other legally protected interest in order to avert such danger from himself or from another, does not act unlawfully if, in weighing the conflicting interests, particularly the affected legally protected interests and the degree of danger with which they are threatened, the interest which he protects significantly outweighs the interest which he harms. However, the foregoing applies only insofar as the means employed are not excessive for the aversion of the danger,

(2) If in acting, the perpetrator erroneously assumed the existence of circumstances under which paragraph 1 would justify his conduct, he shall be punished only if he can be blamed for the error....¹⁴⁰

Hitchler reports a case in Germany wherein an athletic instructress and a male escort (a merchant) were riding in a rowboat on a lake. A sudden storm came up, causing the boat to leak, and the teacher, who was stronger than the man, pushed her friend overboard to save herself. He drowned, and after being rescued the woman was tried for manslaughter. The German Supreme Court applied a provision of the German Code which allowed that anyone who kills another in order to save his own life or the life of a near relative is not guilty, and acquitted the instructress.¹⁴¹

From the Penal Code of India we have another explicit acceptance of the principle of necessity as Justification. According to Gledhill:

The defense of necessity can be pleaded to a charge of doing an act causing harm', if the act was done to prevent other harm so imminent and serious as to justify the risk of the harm actually caused; whether the apprehended danger justified taking the risk is a question of fact.¹⁴²

Both the German and Indian criminal statutes require a showing of "imminent" danger for a defense of necessity to lie. Under Soviet law, however, the "law of necessity" seems far more loose. Rather than "imminence," the danger need only be "threatening the interests" in order to fall within the scope of extreme necessity:

Article 14. Extreme Necessity.

An action shall not be a crime, even though it falls within the indicia of an act provided for by a criminal law but was committed in a state of extreme necessity, that is, in order to eliminate a danger threatening the interests of the Soviet state, social interests, the person or rights of the particular person or other citizens, unless in the particular circumstances this danger could be eliminated by other means and if the harm caused is less significant than the harm prevented.¹⁴³

Under British Law there is no direct statutory authority relating to necessity or survival homicide directly, so the common law controls. Although there are a few cases which hold that it is not criminal for a person to cause harm to the person or property of another,¹⁴⁴ there appears to be no general rule giving rise to a defense of necessity in the common law of England (except self-defense). Outside the narrow limits of the few exceptions, it is no defense in Great Britain to a crime to show that its commission was "necessary" in order to avoid a greater evil to the defendant or to others.¹⁴⁵ The law seems not to trust the citizenry to make a proper choice among evils.

In the United States, a number of states have enacted penal statutes pertaining to the defense of necessity. In Minnesota, the defense has been incorporated into several criminal statutes by the legislature.¹⁴⁶ The Illinois Criminal Code §7-13 (S.H.A. ch.38) allows that:

Conduct which would otherwise be an offense is justifiable by reason of necessity if the accused was without blame in occasioning or developing the situation and reasonably believed such conduct was necessary to avoid a public or private injury greater than the injury which might reasonably result from his own conduct.

It appears that the Illinois statute was intended to be construed liberally.¹⁴⁷ Section 35.05 of the New York Penal Law, on "Justification; Generally," provides essentially the same relief from culpability:

Unless otherwise limited by the ensuing provisions of this article defining justifiable use of physical force, conduct which would otherwise constitute an offense is justifiable and not criminal when:....

(2) Such conduct is necessary as an emergency measure to avoid an imminent public or private injury which is about to occur by reason of a situation occasioned or developed through no fault of the actor, and which is of such gravity that, according to ordinary standards of intelligence and morality, the desirability and urgency of avoiding such injury clearly outweigh the desirability of avoiding the injury sought to be avoided by the statute defining the offense in issue. The necessity and justifiability of such conduct may not rest upon considerations pertaining only to the morality and advisability of the statute, either in its general application or with respect to its application to a particular class of cases arising thereunder. Whenever evidence relating to the defense of justification under this subdivision is offered by the defendant, the court shall rule as a

matter of law whether the claimed facts and circumstances would, if established, constitute a defense.

Section 939.47 of the Wisconsin Code also recognizes the common law defense of necessity, but casts it in terms so narrow that its effect may well be to reduce the scope of the defense that otherwise would be preserved:

Pressure of natural physical forces which causes the actor reasonably to believe that his act is the only means of preventing imminent public disaster, or imminent death or great bodily harm to himself or another and which causes him so to act, is a defense to a prosecution for any crime based on that act except that if the prosecution is for murder the degree of the crime is reduced to manslaughter.

Under Wisconsin law, anyone who commits survival homicide will be excused of murder but may still be tried for manslaughter.

Article 3 of the Proposed Model Penal Code provides generally for the defense of justification in criminal cases. Section 3.02, entitled “Justification Generally: Choice of Evils,” is directly applicable to situations involving survival homicide:

- (1) Conduct which the actor believes to be necessary to avoid a harm or evil to himself or to another is justifiable, provided that:
 - (a) the harm or evil sought to be avoided by such conduct is greater than that sought to be prevented by the law defining the offense charged; and
 - (b) neither the Code nor other law defining the offense provides exceptions or defenses dealing with the specific situation involved; and
 - (c) a legislative purpose to exclude the justification claimed does not otherwise plainly appear.
- (2) When the actor was reckless or negligent in bringing about the situation requiring a choice of harm or evils or in appraising the necessity for his conduct, the justification afforded by this Section is unavailable in a prosecution for any offense for which recklessness or negligence, as the case may be, suffices to establish culpability.

Some of the comments appended to the tentative draft of the Model Penal Code are worth quoting at length for their discussion of the possible applications of Section 3.02:

This Section accepts the view that a principle of necessity properly conceived, affords a general justification for conduct that otherwise would constitute an offense; and that such a qualification, like the requirements of culpability, is essential to the rationality and justice of all penal prohibitions.

The principle is subject to three vital limitations:

- (a) The necessity must be the avoidance of an evil greater than the evil” sought to be avoided by the law defining the offense charged. The balancing of evils cannot, of course, be committed merely to the private judgement of the actor: it is an issue for determination in the trial. What is involved may be described as an interpretation of the law of the offense, in light of the submission that the special situation calls for an exception to the prohibition that the legislature could not reasonably have intended to exclude, given the competing values to be weighed.
- (b) The issue of competing values must not have been foreclosed by a deliberate legislative choice, as when the law has dealt explicitly with the

specific situation that presents the choice of evils or a legislative purpose to exclude the justification claimed otherwise appears...

(c) When the actor has made a proper choice of values, his belief in the necessity of his conduct to serve the higher value exculpates – unless the crime involved can be committed recklessly or negligently. But when the latter is the case, recklessness or negligence in bringing about the situation requiring the choice of evils or in appraising the necessity for his conduct may be the basis of conviction...

While the point has not been free from controversy, it seems clear that necessity has standing as a common law defense; such issue as there is relates to its definition and extent. The decisions, however, have been rare and legislative formulations most infrequent....

We see no reason why the scope of the defense ought to be limited to cases where the evil sought to be avoided is death or bodily injury or any other specified harm; nor do we see a reason for excluding cases where the actor's conduct portends a particular evil, such as homicide....

It would be particularly unfortunate to exclude homicidal conduct from the scope of the defense, as the new Wisconsin formulation does. For recognizing that the sanctity of life has a supreme place in the hierarchy of values, it is nonetheless true that conduct which results in taking life may promote the very value sought to be protected by the law of homicide.¹⁴⁸

What about U.S. federal law? In those areas where the national authority has jurisdiction over criminal activities (as in space vehicles or installations on the moon and other celestial bodies), Title 18 on "Crimes and Criminal Procedure" applies.¹⁴⁹ According to §1111(a):

Murder is the unlawful killing of a human being with malice aforethought. Every murder perpetrated by...willful, deliberate,...and premeditated killing...is murder in the first degree.

Although there is no explicit reference to the defense of necessity, the *Holmes* case (among many others, not involving the question of survival homicide) is mentioned in Note 23 on "Excuse or Justification."

The National Commission on Reform of Federal Criminal Laws proposed a "Section 608" as an embodiment of the legal doctrine of necessity under federal law. In the words of the Commission:

It makes no sense to punish persons who have acted to avoid great harm, even if they have "broken a law" to do so. This would include such obvious instances as speeding in order to reach a hospital in an emergency, or destroying property to stop a forest fire; it would also include extreme cases, such as killing some persons to save a greater number.¹⁵⁰

The proposed reformulation of existing federal law is derived primarily from the Illinois and New York statutes. Also, following the "choice of evils" doctrine set forth in the Model Penal Code, under "Section 608" a life cannot be taken solely for the purpose of saving one other life when each has an equal chance to live. Every human life is an integer of equal value, and the proposed new federal provision would permit justification only when the harm avoided by an act of survival homicide is "clearly greater" than the harm done. One person, then, may validly be sacrificed only for two or more others, and only under conditions of extreme necessity, according to the proposed rule.¹⁵¹

Where military personnel are involved in a space disaster over which the United States has criminal prescriptive jurisdiction, the provisions of the Uniform Code of Military Justice apply. According to Article 118 of the Uniform Code,¹⁵² the crime of murder is defined as follows:

Any person subject to this chapter who, without justification or excuse, unlawfully kills a human being, when he

- (1) Has a premeditated design to kill;
- (2) Intends to kill or inflict great bodily harm;...

is guilty of murder and shall suffer such punishment as a court-martial may direct, except that if found guilty under clause (1) ...he shall suffer death or imprisonment for life as a court-martial may direct.

While there appears to be no military case law as to whether the words “justification or excuse” extend to instances of extreme necessity (such as survival, homicide), the common law of the United States answers in the affirmative and thus may be deemed controlling in the absence of statutory authority to the contrary.

5. Conclusions

In this paper we have examined the question of survival homicide generally and have shown that it does occur, on rare occasions, but normally only in situations involving “extreme necessity.” It is suggested that homicide as a solution to the problem of mutually exclusive survival following a space disaster may be much more common than has been the case in analogous situations on Earth, because of the special difficulties inherent in the extraterrestrial regime. Also, national jurisdiction to prescribe the criminality of conduct in space will lie with the launching State or the State of nationality of the affected astronauts, or with the State of registry of the space object in distress. Finally, we examined the applicable case law and statutory authority on the subject of survival homicide (what little there is), and have concluded that the law today, at least in American jurisprudence, probably involves some combination of the hard tests in *Holmes* (drawing lots permitted among persons owing no duty to each other) and the spirit of the “choice of evils” concept as embodied in the Model Penal Code and the proposed federal law revisions.

In the special context of survival homicide in space, Robinson has raised a number of pertinent issues that are bound to become even more important in the future:

- (1) Has every reasonable step been taken to determine that (a) the possibility of total crew survival rests at an unacceptable level, and (b) the situation, based solely upon the space crew’s conclusion, requires survival homicide?
- (2) Did the victim agree in a pre-mission contract to the possibility of his designed elimination for specified purposes?
- (3) Which is to be considered the priority object of protective laws – the individual, the total group of participants in the space flight, or the mission objectives?
- (4) Since anthropocentric legal positivisms are predicated upon man’s capacity for societal coexistence, does the underlying justification for such positivisms cease to exist when a situation develops in which physiological co-existence is no longer possible?
- (5) Should people living in a “state of nature” be subject to laws which evolved in response to the dictates of a “state of civil society”? If not, should the judiciary of an Earth-oriented “civil society” be placed in the position of adjudicating laws, values, or a

charter formulated to meet the needs of a societal group functioning in a “state of nature”?

(6) What effect should Earth-oriented legal principles have upon the administration of isolated space societies? Should space stations and deep space probes having tenuous physical connections with Earth be considered proper subjects of jurisdiction deriving from individual nations or multilateral sponsoring organizations?

(7) May Earth-bound institutions reasonably expect any space society, involved in a well-reasoned survival homicide crisis, to be controlled or influenced by a factually irrelevant criminal code; specifically, when the crew members and other flight participants are making decisions (a) to live or die, and (b) how to readjust the integrated human/technological system of the space vehicle to avoid loss of the entire membership?¹⁵³

The entire matter of survival homicide in space is hardly a pleasant, easy subject to discuss. People, both the survivors of the ordeal and those who later must sit in judgement of their conduct, must face many hard decisions. It is perhaps best to close with the words of the biographer of the Conner Party tragedy, which someday soon will apply with equal force to a story of ugly disaster and stirring human courage in space:

The story of their ordeal is not pleasant. Few, I fear, will find it always easy reading. But after all, the merely pleasant is thin and bloodless; a picnic in the park scarcely gives humanity a chance to show of what it is capable....Here, if anywhere, we see men and women and children put to the final strain of body and spirit. And since these too in great part endured, others in evil circumstance may be encouraged to fight boldly. For though despair is often close at hand, it never triumphs, and through all the story runs a sustaining bond, the primal force which humanity shares with all earthly creatures, the sheer will to live.¹⁵⁴

Footnotes

1. Scientific American 233(September, 1975), “Solar System” issue.
2. S. H. Dole, *Habitable Planets for Man* (1964); W. S. Krogdahl, *The Astronomical Universe* (1962); I. S. Shklovskii, *Carl Sagan, Intelligent Life in the Universe* (1966).
3. Martin Caidin, *Marooned* (1969).
4. *Ibid.*, pp. 284-6.
5. It is interesting to note that the three Apollo 13 astronauts survived the ordeal by using the power and oxygen stored in the diminutive Lunar Excursion Module or LEM – essentially the world’s first “space lifeboat.”
6. Even in the so-called “Black Hole of Calcutta,” where 146 men were crammed into a nearly cubical cell measuring 18 x 15 feet, there were no overt acts of survival homicide (according to an account written by one of the 23 survivors in 1757). See “Black Hole of Calcutta” in Corbett, ed., *Great True Stories of Tragedy and Disaster* (1963).
7. A. M. Low, *The Submarine at War* (1942).

8. See W. O. Shelford, “Subsunk”: The Story of Submarine Escape (1960); C. E.T. Warren, J. Benson. Only Four Escaped (1959); and C. A. Lockwood, H. C. Adamson, Hell At 50 Fathoms (1962). I
9. See “Rescue Us!” Time 61(April 13, 1953):38; and “Dardanelles Disaster,” Newsweek 41(April 13, 1953):45.
10. See “Miracle in the Mine,” Time 72(November 10, 1958):45; and “Miracle at Springhill,” Newsweek 52(November 10, 1958):33.
11. From C. Champlin, “Miners’ Tales of Prayer, Pain and Bravery Below,” Life 45(November 10, 1958):26-7.
12. See L. Lerner, Miracle at Springhill (1960). However, the miners did cast ballots on whether to amputate the arm of a man who was trapped under some heavy fallen timber. The vote was negative, because the injured miner surely would have died.
13. See F. Downey, Disaster Fighters (1938):136-147 .
14. See “Death in Main West,” Time 49(April 7, 1947): 27-8.
15. See, for example, P. F. Read, Alive (1974) and H. Klaben, Hey, I’m Alive! (1963).
16. G. R. Stewart, Ordeal By Hunger: The Story of the Donner Party (1960).
17. Four fathers left their families, and even three mothers decided that they could serve their children better by abandoning them than by remaining with them. Ibid., p. 120.
18. Ibid., p. 127.
19. Ibid., pp. 127-8.
20. Ibid., p. 133.
21. Ibid., p. 138.
22. Ibid., p. 144.
23. Moriaud, Du Delit Nec’essaire et De L’Etat De Necessite (1889), p. 9.
24. See Read, note 15 supra. On October 13, 1972, a Fairchild F-227 of the Uruguayan Air Force, chartered by an amateur rugby team, crashed in the desolate Andes Mountains near Tinguiririca Volcano. Of the 40 passengers and 5 crewmen, 16 survived the ten-week ordeal by eating the frozen flesh of the deceased comrades.
25. R. F. Scott, Scott’s Last Expedition (1913).
26. See R. McKie, The Survivors (1953); K. Huntress, ed., Narratives of Shipwrecks and Disasters, 1586-1860 (1974); O. Ruhen, Minerva Reef. (1963); and Past True Stories of Courage and Survival, World Publ. Co. (1966).

27. C. Nordhoff, J. N. Hall, *Mutiny on the Bounty* (1943).
28. See E. V. Rickenbacker, *Rickenbacker* (1967); and also "Rickenbacker Safe," *Time* 40(November 23, 1942):25 and "Of Hell and Prayers," *Time* 40(December 28, 1942) :11.
29. S. F. Harby, "They Survived at Sea," *National Geographic* 87(1945):617-640.
30. J. A. Brown, "The Terrible Voyage of the Marie Jeanne," *Reader's Digest* 72(February, 1958):31-9.
31. See "49 Tortured Days," *Newsweek* 55(March 21, 1960):56 and "Four Simple Soviet Lads," *Time* 75(March 28, 1960) :32, 35.
32. See A. B. C. Whipple, "Three-Month Ordeal in Open Boats," *Life* 33(November 10, 1952):144-156 and K. Huntress, note 26 *supra*.
33. Whipple, p. 154.
34. W. Gibson, *The Boat* (1953).
35. Gibson reported s strange phenomenon: "As people decided to jump overboard, they seemed to resent the fact that others were being left with a chance of safety. They would try to seize the rations and fling them overboard {or} pull the bung which would let in the water." See W. Gibson, "Death in the Lifeboat," *Reader's Digest* 56(June, 1950):1-6, 4.
36. *Ibid.*, p. 5.
37. According to The Institute for Creative Studies (Washington, D.C.), *Long-Duration Manned Space Missions – Certain Non-Engineering Aspects* (October, 1970), at p. 32: "In a space disaster the potential for rescue or abandonment is likely to be known with some certainty. When all available sources of oxygen have been totaled, and allowing for maximum narcosis of the crew there is simply too little oxygen for all to breathe, it is unlikely that there is much room to wonder whether the next week will bring unforeseen rescue to the crew. But there are conceivable calamity situations, where the lives lost could be mitigated by sacrifice, and that the value of that sacrifice will be as predictable with as much certainty as humans can ever hope to obtain."
38. See G. S. Robinson, "NASA's Space Station and the Need for Quantifiable Components of a Responsive Legal Regime," *14th Colloquium on the Law of Outer Space* (1972):33-49, 39-42 esp.
39. *The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, entered into force for the United States on October 10, 1967. (18 UST 2410, TIAS 6347, 610 UNTS 205) As of Jan. 1, 1977, 73 States had ratified.
40. S. Gorove, "Legal Problems of the Rescue and Return of Astronauts," *International Lawyer* 3(1969):898 at 899.
41. S. Gorove, "Criminal Jurisdiction in Outer Space," *International Lawyer* 6(1972):313-323.
42. *Agreement for a Cooperative Program Concerning the Development, Procurement and Use of a Space Laboratory in Conjunction with the Space Shuttle System, With Memorandum of Understanding Between the National Aeronautics and Space Administration and the European Space Research Organization*, entered into force for the United States on August 14, 1973. (24 UST 2049, TIAS 7722) .

Parties are U.S., Belgium, Denmark, France, Germany (Fed. Rep.), Italy, Netherlands, Spain, Switzerland, and United Kingdom as of Jan. 1, 1977.

43. As, for example, the Agreement On the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched Into Outer Space, entered into force for the United States on December 3, 1968. (19 UST 7570, TIAS 6599, 672 UNTS 119). As of Jan. 1, 1977, 68 States had ratified. See also S. H. Lay, H. J. Taubenfeld, *The Law Relating to Activities of Man in Space* (1970):94-6; and J. R. Tamm, "Further Reflections Upon the Legal Aspects of Skylab and the Space Shuttle," 16th Colloquium of the Law of Outer Space (1974):242-246, 244-5.

44. Convention on the International Liability for Damage Caused by Space Objects, entered into force for the United States on October 9, 1973. (24 UST 2389, TIAS 7762). As of Jan. 1, 1977, 46 States had ratified.

45. Engineer Robert Truax of Saratoga, California believes he can build a one-man rocket able to lob private individuals up to at least 50 miles – the borderline of space – for "only" \$1 million. See P. Siegler, "Be Your Own Astronaut," *L-5 News* 3(April, 1978):6.

46. A German company, named OTRAG, will be entering the space launch business in the early 1980's with what they believe is a "competitive" booster vehicle. See Carolyn Henson, "OTRAG: Progress in the Face of Adversity," *L-5 News* 3(August, 1978):4-8.

47. See also M. S. McDougal, H. D. Lasswell, I. A. Vlasic, *Law and Public Order in Space* (1963), pp. 128-9.

48. See I. H. Ph. Diedericks-Verschuur, "Legal Aspects of Laboratories on the Moon," 14th Colloquium on the Law of Outer Space (1972):24-6, 25; J. J. Lopez-Gutierrez, "Legal Status of Space Vessels – Nationality (Unilateral J Decisions) v. Internationality (Multinational Operation)," 9th Colloquium on the Law of Outer Space (1967):132-142, 138-9; A. Bueckling, "The Formal Legal Status of Space Stations in Orbit," 18th Colloquium on the Law of Outer Space (1974):214-8; Lay and Taubenfeld, *supra* Note 43, pp. 87-89; J. G. Verplaetse, *International Law in Vertical Space* (1960):420-7; M. S. McDougal, "The Prospects for a Regime in Outer Space," in M. Cohen, ed., *Law and Politics in Space* (1964):105-123, 119-120; McDougal, Lasswell, and Vlasic, *supra* Note 47, pp. 666-674, 689, 695-704; H. Safavi, "The Problem of Applying Terrestrial Law in Outer Space," 4th Colloquium on the Law of Outer Space (1963):130-7, 134-5; A. G. Haley, "Space Salvage-Artifacts and Personnel in Space and on Terrestrial Jurisdictions," 8th Colloquium on the Law of Outer Space (1966):119-130, 121-2; S. Estrade, "Coexistence in Space Stations," 20th Colloquium on the Law of Outer Space (1978):213-5, 214; I. H. Ph. Diedericks-Verschuur, "The Impact of Space Law on General International Law," 16th Colloquium on the Law of Outer Space (1974):13-16, 14-5; and M. A. Ferrer, "Earth Orbital Stations: Introductory Report," 16th Colloquium on the Law of Outer Space (1974):207-213.

49. See McDougal, Lasswell, and Vlasic, *supra* Note 47, pp. 657, 668-674, 669.

50. Lay and Taubenfeld, *supra* Note 43, p. 203. With regard to this "active personality" test, see also McDougal, Lasswell, and Vlasic, *supra* Note 47, p. 699, footnote 147.

51. See McDougal, Lasswell, and Vlasic, *supra* Note 47, p. 700, footnotes 151, 152.

52. N. E. Leech, C. T. Oliver, J. M. Sweeney, *The International Legal System* (1973): 194-6.

53. McDougal, Lasswell, and Vlasic, *supra* Note 47, pp. 701-2.

54. The Treaty was accepted for the United States by President Lyndon B. Johnson, on October 10, 1967, in Washington D.C., in a proclamation which provides, in part:

“Whereas the Senate of the United States by its resolution of April 25, 1967, two thirds of the Senators present concurring therein, did advise and consent to the ratification of the Treaty; . . .

“Now, therefore, be it known that I, Lyndon Baines Johnson, President of the United States of America, do hereby proclaim and make public the Treaty..., to the end that the Treaty and every article and clause thereof shall be observed and fulfilled with good faith, on and after October 10, 1967, by the United States of America and by the citizens of the United States of America and all other persons subject to the jurisdiction thereof.”

55. Article VI, clause 2.

56. See *Missouri v. Holland*, 252 U.S. 416, 40 S.Ct. 382 (1920); *Asakura v. City of Seattle*, 265 U.S. 332, 44 S.Ct. 515; and *Sei Fujii v. State*, 242 P.2d 617, 38 Cal.2d 718 (1952). See also American Law Institute, *Restatement of the Foreign Relations Law of the United States*, Reporters’ Notes to Section 154 (1965).

57. The following discussion draws heavily from Lay and Taubenfeld, *supra* Note 43, pp. 201-4.

58. 10 U.S.C. §§801-940, 70 A. Stat. 37 ff.

59. 10 U.S.C. §802, UCMJ Art. 2.

60. 10 U.S.C. §805, UCMJ Art. 5.

61. Lay and Taubenfeld, *supra* Note 43, p. 201.

62. *Reid v. Covert*, 354 U.S. 1 (1957); *Kinsella v. Singleton*, 361 U.S. 234 (1960); *Grisham v. Eagan*, 361 U.S. 278 (1960); *McElroy V. Guagliardo*, 361 U.S. 281 (1960); and *Toth v. Quarles*, 350 U.S. 11 (1955).

63. See 18 U.S.C. §7 (June 25, 1948); 62 Stat. 635.

64. 49 U.S.C. §1472(k)(l) explicitly extends coverage to aircraft within the “special aircraft jurisdiction of the United States,” as defined in 49 U.S.C. §1301.

65. Lay and Taubenfeld, *supra* Note 43, p.202, footnote 3.

66. 18 U.S.C. §1111(b).

67. 18 U.S.C. §1112(b).

68. 18 U.S.C. §1113.

69. *United States v. Cordova*, 89 F.supp. 298 (1959).

70. Lay and Taubenfeld, *supra* Note 43, p.202-3, footnote 10.

71. Congress could also provide for “guild rules,” wherein the “astronaut corps” would be responsible for prescribing and enforcing their own rules of conduct. See C. Q. Christol, “Space Stations: Present and

Future,” 17th Colloquium on the Law of Outer Space (1975):364-378, 370-2; and G. S. Robinson, “Space Law – Earth Law: Recognizing and Accepting the Distinction,” 19th Colloquium on the Law of Outer Space (1977):79-91, 86-9.

72. See Article II of the Outer Space Treaty, which says: “Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”

73. L. L. Fuller, “The Case of the Speluncean Explorers – In the Supreme Court of Newgarth, 4300,” *Harvard Law Review* 62(1949):616-645.

74. *The World Almanac and Book of Facts* (1975), p. 963.

75. *Reader’s Digest 2975 Almanac and Yearbook* (1975), p. 935.

76. P. Shuchman, “Ethics and the Problem of Necessity,” *Temple Law Quarterly* 39(1966):279-298, 283.

77. See Williams, *The Compleat Strategist* (1954). The sum of the winnings taken as positive numbers and the losses taken as negative numbers always equals zero in a zero-sum game.

78. Moberly, *Responsibility* (1956), p. 58.

79. See *infra* and *Jonah* 1:7, 15.

80. *Philadelphia Evening bulletin* (November 1, 1961):2.

81. *New York Times* (October 14, 1961).

82. Father McHugh states conditions which seem to involve self-defense, but ultimately he decides in favor of the shelter owner on grounds of his property rights, and superior prudence and foresight. See Fr. L. C. McHugh, “Ethics at the Shelter Doorway,” *America* (September 30, 1961):826.

83. A. Cohen, *Everyman’s Talmud* (1949); Horowitz, *The Spirit of Jewish Law* (1953) .

84. Moore, *Judaism in the First Centuries of the Christian Era*, Vol. 2, (1927):82-3.

85. *Babylonian Talmud*, *Baba Mazia* (1962).

86. Kohn, *Basic Writings of Ahad Haam* (1962): 303.

87. 14 Q.B.D. 273 (1884).

88. B. N. Cardozo, “What Medicine Can Do For Law,” address before N.Y. Academy of Medicine, Nov. 1, 1928. Reprinted in *Law and Literature and Other Essays and Addresses* (1931).

89. Aristotle, 111 *Ethics* 1110a.

90. The crew first threw the cargo overboard in an effort to save the vessel before Jonah was finally thrown into the sea to be swallowed by the whale. See Ginzberg, *Legends of the Bible* (1956):605.

91. See *Mishnea Torah of Maimonides, Wounding*, etc. VIII.

92. T. Hobbes, *Leviathan*, pt. 2, ch. 2 (1651).
93. Shuchman, *supra* Note 76, footnote 70.
94. Lord Bacon, *Maxims*, Reg. V: “Necessity carrieth a privilege in itself. Necessity is of three sorts – necessity of conservation of life, necessity of obedience, and necessity of the act of God or a stranger. First of conservation of life: If a man steals viands to satisfy his present hunger, this is no felony. So if divers be in danger of drowning by the casting away of some boat or barge, and one of them gets to some plank or on the boat’s side to keep himself above water, and another to save his life, thrust him from it, whereby he is drowned, this is... justifiable.” 1 Hawk. P.C. c.28, §26: “The killing of an innocent person in defense of a man’s self is said to be justified in some special cases; as if two be shipwrecked together, and one of them get upon a plank to save himself, and the other also, having no other means to save his life, thrusts the other from it, whereby he is drowned, it seems that he who thus preserved his own life at the expense of that other may justify the fact by the inevitable necessity of the case.” See also Wharton, *Homicide*, 3rd ed; p. 561, §348; p.562, §349; and also 4 Stephen, *Commentaries on the Laws of England* 101 (1st ed. 1841).
95. 1 Works of Jeremy Bentham, pt. II, ch,IV, §111 (Bowring ed. 1943).
96. “If a man is on a plank in the deep sea which will only float one, and a stranger lays hold of it he will thrust him off if he can.” Holmes, *The Common Law* (1963):38.
97. Shuchman, *supra* Note 76, footnote 73.
98. I. Kant, *Introduction to the Science of Right* (1887).
99. Suppose that the actor has opened a breach in a dike he is charged with maintaining, knowing that this action will inundate a farm but will save a town. If charged with homicide of the inhabitants of the farmhouse, he may argue that the purpose of the law of homicide is to save life, and that by his conduct he has effected a net saving of innocent lives. (Each life is assumed to have equal value.) So too a mountaineer roped to a companion who has fallen over a precipice, who holds on as long as possible but finally cuts the rope to save himself, should also be granted the defense of necessity inasmuch as he accelerated one death slightly but avoided the only alternative, the certainty of death for both. See Wechsler and Michael, “A Rationale of the Law of Homicide,” *Columbia Law Review* 37(1937):701, 738-9.
100. *Rex v. Stratton*, 21 St.Tr. 1046 (1779).
101. *Oldcastle’s Case*, 3 Co.Inst. *10, 1 Hale, P.C. 50, 1 East, P.C. 70; and *Kawakita v. United States*, 343 U.S. 717, 72 S.Ct. 950, 96 L.Ed. 1249 (1952).
102. *The Diana*, 74 U.S. 354 (1868); *U.S. v. Ashton*, 24 Fed.Cas. 873 (No. 14,470) (C.C.D. Mass. 1834); *Hamilton V. United States*, 268 F. 15 (1920).
103. *Matter of Licenses-Flying Clipper*, 1958 A.M.C. 1546 (Coast Guard 1958), citing *U.S. v. Reid*, 210 F. 486 (D.Del. 1913).
104. *The William Gray*, 29 Fed.Cas. 1300 (No. 17,694) (C.C.D.N.Y. 1810).
105. 1 Plowden’s Reports 13 (1816); *People v. Whipple*, 100 Cal.App. 261, 279 p. 1008 (1929).

106. *Dempsey v. U.S.*, 283 F.2d 934.
107. *Rex v. Bourne*, 5 All Eng.R. 615 (1938).
108. *Commonwealth v. Patterson*, 16 K.N.C. 193 (Pa. 1885).
109. *State v. Gorham*, 110 Wash. 330, 188 P. 457 (1920).
110. *Commonwealth v. Brooks*, 99 Mass. 434 (1868).
111. *C. & O. Ry. Co. v. Commonwealth*, 119 Ky. 519, 84 S.W. 566 (1905).
112. *Cross v. State*, 370 P.2d 371 (Wyo. 1962). See also Annotation, 93 A.L.R.2d 1366 (1964).
113. *Marchand, De L'Etat de Neaessite en Droit Penal* (1902), p. 247.
114. *Pufendorf, The Law of Nature and Nations* (1729), p. 204.
115. H. Stephens, "Homicide by Necessity," *Law Quarterly Review* 1(1885);51-61, 57.
116. *Moriaud*, supra Note 23, p. 9; see also *Huntress*, supra Note 26.
117. 1 Wall.Jr.(C.C.) 1, 26 Fed.Cas. 360 (No. 15,383) (C.C.E.D. Pa. 1842).
118. *Hicks, Human Jettison* (1927) gives a more detailed account of this case. See also *Perkins, Criminal Law* (1957):849-851.
119. *United States v. Kroncke*, 459 F.2d 697 (1972); *State V. Marley*, 509 P.2d 1095; *Cottrell v. Commonwealth*, 111 S.W.2d 445; and *State v. Johnson*, 183 N.W.2d 541.
120. *United States v. Holmes*, supra, p. 360.
121. *Ibid.*, p. 361.
122. *Ibid.*, p. 366.
123. Resolution by lottery appears to have the longest pedigree, dating back to the Book of Jonah, although there the lots were cast to determine who aboard the vessel had caused the storm. In Jonah 1:7, we find: "And they said every one to his fellow; Come, and let us cast lots, that we may know why this evil is upon us. And they cast lots, and the lot fell upon Jonah." In 1:15 we have: "And they took Jonah, and cast him into the sea, and the sea ceased from raging." Thus we have early Biblical authority that a choice by lots will be guided by the Deity and will invariably select the "correct" person, and also that the casting overboard of the individual upon whom the lot falls may save a foundering ship!
124. *United States v. Holmes*, supra, p. 367.
125. *Shuchman*, supra Note 76, p. 285.
126. *Ibid.*, p. 285-6.

127. Williams, *Criminal Law: The General Part* (1955), p. 745.
128. Shuchman endorses the idea that “those should be spared who are most apt to survive and best able to help others to survive. Note 76, p. 295.
129. *United States v. Holmes*, *supra*, p. 367.
130. Among the criminal statutes which permit necessity as a defense to homicide, the criminal actor is generally not shielded from liability if it is his duty or obligation to engage in activities likely to create situations of a life-threatening nature. For example, the Criminal Code of Yugoslavia, Art. 12(4) (1960), provides that “there shall be no extreme necessity when the perpetrator was obligated to expose himself to danger.” The Criminal Statutes of Japan, Art. 37.2 (1957), excludes from justification those person who have “a special professional or occupational duty to do the unavoidable act” in situations of necessity. And the Statutory Criminal Code of Germany, Comment 1 to §54 (Library of Congress, 1947), denies the defense of necessity to police officers, guards, professional mountain climbers, soldiers, and sailors, where it was the legal duty of the actor to meet the danger.
131. Apparently it is usually the passengers, and not the Captain or crew, who go down with the ship. See A. A. Hoehling, *They Sailed Into Oblivion* (1959); *Van Shaick v. United States*, 159 F. 847; *The Vestris*, 60 F.2d 273.
132. Apparently two lotteries must be held in lifeboats carrying some persons with duties to the others. Those with the duty (presumably the crew) must draw lots among themselves and kill only from within their own ranks, before they can legally force any passengers to undergo “sortition.”
133. 14 Q.B.D. 273, 15 Cox C.C. 624 (1884).
134. The following description is drawn heavily from M. G. Mallin, “In Warm Blood: Some Historical and Procedural Aspects of *Regina v. Dudley & Stephens*,” *University of Chicago Law Review* 34(1967):387-407.
135. *Regina v. Dudley & Stephens*, *supra*, p. 276-7.
136. Mallin, *supra* Note 134, pp. 405-6.
137. *Ibid.*; also, Robinson, *supra* Note 38.
138. Under *Holmes*, the survivors in Captain Pollard’s boat (the wreck of the *Essex*, p. 8) would have been acquitted, but Walter Gibson (wreck of the *Rooseboom*, p. 9) would probably have been adjudged guilty of murdering the “murder gang” unless some plea of self-defense could be proven. Similarly, the survivors of the *Medusa* shipwreck (p. 20) ought to be guilty, but the English sailors in Pufendorf’s case (p. 19) would be acquitted, under the *Holmes* test.
139. See, for example, Criminal Statute of Japan, Art. 37 (Ministry of Justice, Japan, 1957); and Criminal Code of Yugoslavia, Art. 12 (Beograd, 1960).
140. Mueller, ed., *German Draft Penal Code*, *The American Series of Foreign Penal Codes*, Vol. 11 (1966):36.
141. W.H. Hitchler, “Necessity as a Defense in Criminal Cases,” *Dickinson Law Review* 33(1929):138-148.

142. A. Gledhill, *The Republic of India: The Development of its Laws and Constitution* (1964), 2nd ed., p. 229.

143. W. E. Butler, *The Soviet Legal System* (1978).

144. These cases include self-defense, defense of property, force used in the prevention of crime, duress, and marital coercion. It has also been held lawful to pull down houses to prevent the spread of fire. Cargo may be jettisoned to lighten a ship in a storm, *Mouse's Case* 12 Co. Rep. 63 (1608).

145. See *P. v. Kitson*, 39 Cr.App.Rep 66 (1955); *Buckoke v. Greater London Council*, 2 All E.R. 254 (1971); *Southwark London Borough v. Williams* 2 All E.R. 175 (1971). But compare *Johnson v. Phillips*, 119 Sol.Jo. 645 (1975) – a constable has the right to direct a driver to disobey traffic regulations where necessary to protect life and property.

146. Minn. St. 243.52 (justified killing of convicts by prison guards), 609.06 and 609.065 (justified killing by public officers and persons acting in defense of life), and 609.765 (relates to criminal defamation).

147. Ill. Rev Stat. §7-13, Comment at 304 (1961).

148. Comments to Tentative Draft No. 8 (1958), pp. 5-9. (Model Penal Code)

149. June 25, 1948; 62 Stat. 756.

150. Working Papers of the National Commission on Reform of Federal Criminal Laws, Washington, D.C. (July, 1970), p. 270.

151. *Ibid.*, p. 271, footnote 23.

152. 10 U.S.C. §918.

153. *Robinson*, supra Note 38, pp. 42-3.

154. *Stewart*, supra Note 16, pp. 297-8.

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November 30, 1978

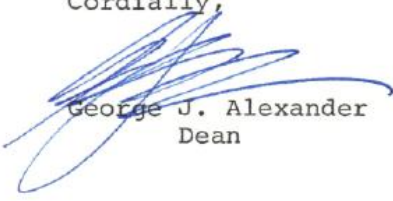
Mr. Robert A. Freitas, Jr.
100 Buckingham Drive #253
Santa Clara, California 95051

Dear Mr. Freitas:

I have read with great interest your article entitled Survival Homicide in Space. It certainly satisfies your responsibility for individual research. Beyond that I think it is damn good! What do you plan to do with it?

Best wishes.

Cordially,



George J. Alexander
Dean

GJA:fb