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PERSONALITY ADAPTATION IN SURVIVAL

Case Studies of USAF Survival Evaders in Korea

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By E. Paul Torrance

February 1956

SURVIVAL RESEARCH FIELD UNIT
Crew Research Laboratory (AFP&TRC) (ARDC)
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PERSONALITY ADAPTATION IN SURVIVAL: Case Studies of USAF Survivor-Evadees in Korea[1]

E. Paul Torrance

INTRODUCTION

Early in its history, the Survival Research Field Unit undertook a series of studies of the personality requirements for survival in emergencies and extreme conditions. The objectives of these studies included the following:

1. To furnish clues regarding criteria for the evaluation of survival training performance.

2. To provide a basis for developing instructional methods which will insure the best possible psychological preparation for survival.

3. To supply psychological information for use in survival training programs.

A study of the accounts of survivors of Air Force emergencies and extreme conditions of many kinds led to the compilation of the following list of personality requirements for survival (13):

1. Decisiveness
2. Ingenuity
3. Personal resourcefulness
4. Flexibility
5. Ability to maintain calmness
6. Realistic optimism
7. Patience
8. Tolerance of the unpleasant
9. Sensitivity to others
10. Appropriate release of aggression
11. Unobtrusiveness
12. Control of handicapping childhood anxieties.

Each of these characteristics was analyzed with reference to survival training situations and tentative suggestions for instructional methods and techniques in field training were formulated (13).

A survey of the literature (14) indicated that aggressiveness, extroversion, high energy level, and stability are conducive to resistance to stress. Individuals least able to withstand severe stress have been variously described as: anxious-depressive; nice, decent people; unobtrusive or shy and self-conscious; irresolute and easily disappointed;

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[1] This paper is an informal note and is subject to modification or withdrawal at any time. If references, it should be described as an "unpublished draft."

unsociable and unaffectionate; effeminate and over-dependent; and lacking in self-confidence. In spite of such positive findings as the above, the survey of the literature indicates the unsatisfactoriness of the usual classifications in personality description and diagnosis. Even marked neurotics and psychopaths may, it seems, perform adequately under severe stress.

A consideration of the findings summarized above led the author to examine the problem through the concept of personality adaptation in emergency and extreme conditions. Thus, the focus of the analysis of the data reported herein is "adaptation." It seems desirable, therefore, to summarize some of the more pertinent concepts of adaptation.

CONCEPTS OF ADAPTATION IN EMERGENCIES AND EXTREME CONDITIONS

Perhaps the most familiar concept of adaptation is the one which exhorts "to do in Rome as the Romans do." This principle can be applied to many situations and can be used as a guide in adapting behavior in many new situations. Over the years, the natives of an area such as the Arctic have evolved methods of living and working suited to survival in that area. Unwillingness to accept this principle has, of course, been responsible for much unnecessary suffering and many unnecessary deaths.

Adaptation to natural conditions such as extreme cold might be taken as an example. Some people try to overcome cold by "will-power" instead of by adaptation or avoidance. As Stefansson (11) argues, the human being is capable of only an insignificant biologic adaptation to cold. Stefansson's advice is to neither fight nor endure cold, but to adapt to it. This means wearing the proper clothes, erecting the proper kind of shelter, eating the proper kinds and amounts of food, and engaging in appropriate activities.

Another issue which has received wide attention is whether or not adaptation is survivalistically purposeful. The theory of psychoanalysis holds that behavior is automatically regulated by the pleasure principle -- that is, behavior is set in motion by unpleasurable tensions and takes a direction such that its outcome is to avoid unpleasure or to produce pleasure (6). This theory also holds that under the instinct of self-preservation, the pleasure principle is replaced by the reality principle. Satisfaction is postponed and discomfort tolerated in favor of survival. The psychoanalyst admits, however, that there are times when the pleasure principle succeeds in overcoming the reality principle to the detriment of the organism.

Murray (8) maintains that the reactions of the human organism to its environment usually exhibits a unitary trend. According to his concept, the survival of the organism depends upon the fact that the vast majority of these trends are "adaptive." They serve to restore an equilibrium that has been disturbed, to avoid an injury, to attain

objects which are of benefit to development. Arsenian defines adaptive behavior as "behavior directed with reference to goal-regions in the situation" (2, p. 496). Powdermaker (9) discusses a somewhat similar concept in connection with the adaptability of the American Negro. According to her, the Negro adapts to any circumstance in which he finds himself, no matter how painful, because he imagines a future where his fine qualities are acknowledged by those who had formerly disdained him. He continues to adapt in the assurance of ultimate victory. Thus, he cannot be hurt in the way that people without his faith are hurt.

A currently promising concept is Selye's "General Adaptation Syndrome (G-A-S)" (10). According to this concept, adaptation consists of three distinct stages, namely:

1. The alarm reaction in which adaptation has not yet been acquired.
2. The stage of resistance, in which adaptation is optimal.
3. The stage of exhaustion, in which the acquired adaptation is lost again.

Some have argued that one adapts to almost anything after repetition. Most crucial is the immediate shock, the alarm reaction of Selye. Bettleheim (3) describes the process in the Nazi concentration camp; Allport, Bruner, and Jandorf (1) have also described the process of adaptation under the Nazi regime. Some actively resisted recognition of the seriousness of the situation or failed at first to make a realistic adaptation to it.

The development of hysterical symptoms has also been described as a type of adaptation to danger. For example, Grinker and Spiegel described the case of a combat platoon leader whose symptom of a paralysed arm served an adaptive function in that it kept him out of combat (7, pp. 103-104). In battle, he performed quite courageously; otherwise, he would not have survived. Yet, as soon as the immediate danger had passed, he developed the paralysis. Further evidence is that pilots turn up with disturbances in depth perception or night vision, symptoms peculiarly suited to interference with flying, while paratroopers are likely to have paralysed legs.

In summary, it appears that there are automatic, survivalistically-oriented tendencies to adaptation. In emergencies and extreme conditions, however, there are dangerous tendencies which resist immediate adaptation. Furthermore, the human organism is extremely limited in its capacity for biologic adaptation to conditions such as extreme cold and must resort to other techniques of adaptation or avoidance. Strong motivation, will-to-survive, or goal-orientation appear to be extremely important at all stages of adaptation and in all types of situations.

METHOD

The subjects of the study are five Air Force officers and one airman who were downed over Korea behind enemy lines and who evaded or were rescued. Each of these men spent approximately one week on temporary duty at the Advanced Survival School. During this time, staff members of the Survival Research Field Unit spent at least one day with each man on an individual basis, interviewing him and administering a small battery of psychological tests.

The interviewing and testing procedures were selected for their appropriateness in yielding an understanding of the adaptation process. These procedures have been described in detail in a previous paper (15) and included the following:

1. The official account of the survival experience as recorded in the FEAF Evasion and Escape Reports.

2. An intensive interview with the survivor-evadee, emphasizing the psychological aspects of the survival experience.

3. A specially designed survival form of a biographical inventory.
4. Two personality self-evaluations: usual behavior and survival behavior.
5. The Rorschach.

Each of the six sets of data were quantified by Stephenson's Q-sort methodology (12) as a means of integrating the mass of data collected on each of the six cases and for comparing the different sets of data. This method forces the rater to summarize each set of data by rating statements according to the degree they characterize the subject. The same set of 50 statements of characteristics were used throughout the study.

These statements were also used in developing an "ideal-survivor" sort. This was developed from the composite judgments of ten survival experts (5 psychologists and 5 escape and evasion experts).

THE SIX EVADEE-SURVIVORS

The six evadee-survivors whose case studies are examined in this report present a variety of survival experiences. The major dimensions of the situations are summarized on the next page, and, where possible, will be presented in the case studies. Some of the stories of the subjects have been declassified and published (4,5). It will be possible to discuss these rather freely. Others can be discussed only in the broadest dimensions. All names and specific names of places have been omitted in order to insure as great a degree of anonymity as possible.

SUMMARY OF SURVIVAL SITUATIONS

Category	Situation 1	Situation 2	Situation 3	Situation 4	Situation 5	Situation 6
Position	B-26 Nav.	F-80 Pilot	B-29 Gunner	Forward Ground controller	F-80 pilot	B-26 Nav.
Rank	Captain	1st Lt	A/1C	Captain	1st Lt	Captain
Age	31	26	25	29	25	27
Season	Winter	Winter	Winter	Spring	Summer	Spring
Terrain Condition	Snow, Ice	Snow, ridges	Water snow	ridges river	water islands	steep slopes
Nature of emergency	Delayed bailout; burning acft; behind enemy lines; no immediate contact	Crash landing on beach behind enemy lines	bailout; crew mbrs. scattered; near main line of resistance	Cut off from friendly forces; small unit; assorted personnel	Ditching behind enemy lines	Bailout in enemy territory; contact soon after landing
Physical Condition	severe burns; broken arm	cuts, back injury	Good	Good	Good	Broken leg
Alone or with Group	Alone	Alone	Alone	Unorganized group	Alone	Alone
Time out	84 days	4 days	5 hours	3 days	4 days	2 hours
Native help	Cared for and assisted in return	Cared for and assisted in return	No contact; escaped to friendly troops	Natives in group; escaped to friendly lines	Assisted in escape; given food	Faced by hostile natives soon after landing Helicopter rescued.

CASE 1: THE CAVE MAN

Subject was a B-26 navigator in Korean combat and holds the rank of captain. His is the most lengthy of the six survival experiences considered in this study -- 84 days.

The Survival Experience

The official account of the inflight emergency revealed several personality characteristics which endangered his chances of survival. He appears to have assumed an attitude of unrealistic optimism and attempted to deny the reality of the danger too long. There are several clues to the devices by which he tried to delude himself. For example, at one point he said, "Small arms fire sounded like hail." Although it may sound far-fetched, it is conceivable that he tried to deny the danger of the situation by telling himself, "It is only hail. There is no real danger. We won't have to jump." Even when he smelled the smoke and saw fire, he insisted upon sticking with the aircraft rather than bailing out.

One can only speculate concerning the statement, "I did not want to jump." Is it that he had an unusually strong fear of jumping or was it only a function of his denial of the reality of the situation? Even if the latter, it might have been that his fear of jumping was what made it so painful and difficult to accept the reality of the danger. Whatever the explanation, he appears to have been thrown into a state of momentary panic.[2]

He showed concern for the gunner by continuing to call him to try "to make sure that he knew what we were doing all the time." When the danger of the situation was finally accepted, there was shock and panic of the desperate fighting kind. Seeing his left glove on fire, he yanked it off and found that a part of his flesh had stayed on the glove and the skin was hanging in shreds. He cannot remember getting out of the aircraft. He does, however, remember trying to pull the rip cord with his right arm. Finding it broken, he pulled it with his burned left hand.

Once on the ground, he was evidently able to regain his equilibrium. After continuing down a drainage ditch for some time, he approached some natives and tried to communicate to them that he wanted to get to Seoul. He sensed, however, that they were made nervous by his presence, so he waved them "goodbye" and departed in as unobtrusive a manner as possible. Later, a North Korean civilian took a shot at him, barely missing him. He kept going, however.

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[2] It was later ascertained (4, p. 107) that he was urging the pilot to try to reach an area near the west coast, where a group of Christian Koreans lived, before bailing out. This, however, may have been a rationalization of his behavior.

At this point he manifested much fortitude, not only in "sweating out" the actions of hostile natives but in tolerating physical discomforts as well. He does not mention pain from his broken arm nor from his burns. He only mentions the fact that he felt sick and sweated a lot. Whenever he stopped to rest or hide, he would almost freeze from his sweaty clothing. This forced him to keep walking in order to keep warm. The record gives indications of carelessness resulting from fatigue and weakening of will to survive.

He finally decided to take another chance on obtaining aid from friendly North Koreans. Again, he was waved away. Just as all hope of assistance was ebbing, he was approached by an old man of about 60 years of age. The handshake was extremely painful, but the subject stated that he was never so happy to see anyone in his life. He displayed considerable ingenuity in communicating with the old man and in identifying himself. The subject was sensitive to the anxieties of his rescuers and cooperated with them.

During the following days and weeks, he was hidden in dugout holes near the house of the friendly family. He constantly planned escapes. He disagreed with his rescuers about escape plans but "went along with" their plans because he did not want to risk spoiling his relationship with them. As his security became more precarious and it became necessary to restrict himself more closely to his hideout hole, he had to learn tolerance of monotony and disappointment after disappointment.

He was finally rescued when the ice melted sufficiently for him to be taken out on a junk to meet a Naval vessel. Again, he demonstrated his ingenuity in preparing flags to signal to the Naval vessel that "an American was on board." He also demonstrated his sensitivity to others and his appreciation for their assistance.

A review of the record indicates the presence of most of the twelve characteristics previously hypothesized as personality requirements for survival. Specifically, they include: tolerance for the unpleasant, patience, sensitivity to the feelings of others, unobtrusiveness, ability to regain control, resourcefulness, ingenuity, and flexibility. The success of his survival effort was threatened from time to time by the presence of handicapping childhood anxieties, lack of realistic optimism at times, and a tendency at times to become somewhat panicky.

The results of the Q-sorts made by three judges as previously described combined to form a kind of composite sort. The four <u>most characteristic</u> statements are:

He can take a lot of physical punishment or discomfort.

He has developed a good deal of self control.

He spends a good deal of time thinking about and planning his future.

He is rather dependent upon the presence and judgment of his friends.

The four statements judged least characteristic are:

He likes being in the thick of action.

He often acts on the spur of the moment without stopping to think.

He feels it safer to trust nobody.

He usually says "no" when others offer to help him.

The Interview

In the interview, many hypotheses formulated on the basis of the record received further support. Others were clarified or modified. Only those parts of the interview which provided needed elaboration, modification, or clarification of previously formulated hypotheses will be discussed.

The subject was a slender, neat appearing man of somewhat above average height. He manifested an exceptionally friendly and cooperative attitude and it was immediately apparent that he possessed good verbal facility, in spite of a slight speech impediment. He would talk for a considerable length of time without stuttering, but would stutter considerably at certain points in his narrative. According to him, he stuttered during his boyhood but had "outgrown" this tendency until after his survival experience. For a while, he stuttered severely, but had recently improved greatly. Although there was an apparent slight tenseness during the interview, he gave evidence of strong controls and good mental efficiency. He was particularly neat, clean, and trim in dress and person.

The subject's most extreme fear experience seems to have been during the in-flight emergency. He was not adequately prepared psychologically for the experience, having never accepted the fact that "it could happen to him." He had never had any survival training and had never resolved his fear of bailout. These factors may have been responsible for his urging the pilot not to bailout.

The turning point in controlling his panic seems to have been his final decision to jump and getting free of the aircraft. After this, he seems to have acted with calm and effectiveness. In spite of a broken arm, he pulled his rip cord and made a safe landing. He explained his reactions in the following words:

> "When I hit the ground, fear was the furthest thing in the world from me. Everything came to me like somebody telling me everything to do and I did it. It was like all of my past briefings speaking out to me. This was surprising, because I hadn't half listened to them. I threw away my Mae West, took an inventory of the things I had ... I was cautious but not afraid."

He also maintained that he was not conscious of any pain from the broken arm nor from the very severe burns he had received on his hands, face, and head. Thus, his drive to escape seems to have suppressed his awareness of pain.

From a psychological point of view, some of the most interesting insights yielded by the interview concern the subject's mental processes during his escape effort. There emerged the picture of a man who wanted to live, who wanted his son to have a father. (The subject's father died while the subject was quite young.) There is also a picture of a man who was desperate. He had a broken arm and severely burned hands, face, and head. He had been walking for hours wearing heavy flying boots which had badly blistered his feet. He had been unable to find water. He could only walk mechanically, forcing one foot in front of the other. He felt that he was at the end of his resources. His goal had been to evade to the South where he understood there were Christians who could be counted upon to help him.

As the cumulative effects of cold, hunger, thirst, and fatigue began to mount, this specific goal became too distant for realization. Neither hiding and resting nor continuing offered hope of survival. As he saw it, his only hope was to obtain help from natives, to place himself in their hands. Even if the natives he contacted were Communists, he might still survive.

Numerous evidences of ingenuity and resourcefulness were revealed by the interview. Forced to cross a frozen stream, he found that it was like climbing rocks. The fact that he could not use his hands made this practically impossible. He simply crossed the stream by sitting down and sliding across the ice.

In dealing with his rescuers, he constantly showed ingenuity in finding ways of communicating with them. Drawing pictures, using gestures and motions, and using his "pointie talkie" were effective. Communications involving "cultural universals" were fairly easy. Matters unfamiliar in their culture were the ones that caused trouble. For example, the Koreans wanted to know what his job on the aircraft was. He could find no way of explaining that he was a navigator. After futile attempts, he told them that he piloted the plane. This they understood. On one occasion, he needed cigarette-lighter fluid and had difficulty using Korean matches. In vain, he tried to explain what he wanted. Finally, they gave him an English-Korean book to use for toilet paper. He found the Korean word for "gasoline" and showed it to them. A few days later, he was brought some gasoline for his lighter.

He was resourceful in handling rather extreme boredom and loneliness. He read and re-read the book he was given for toilet paper. It contained quotations from the Bible and Shakespeare. He described his efforts to adapt to boredom and loneliness in the following words:

"Well, I'm pretty good at daydreaming. I spent considerable time in daydreaming about all kinds of things. I thought up more ways to escape which I never used. I thought of what I was going to do when I got back ...During the first few days, I heard music day after day. It was like a church choir. It was mostly Christmas carols and I could hear them hour after hour ... The whole thing was kind of like a phantasy."

"Another thing that I did that helped was timing everything. I timed my smoking of cigarettes. I figure it out that I could smoke one cigarette every one and one-half hours. If I fell asleep and missed one, I could splurge. Apples were the same way. I would section up my apples and eat one section every one and one-half to two hours."

" I also kept a calendar which was a kind of log. I worked out different symbols to show what happened on each day. At first, I made a stick mark on the wall each day. Then I was moved to another dugout and my calendar was gone. Then I kept it on a piece of paper and used symbols to indicate different happenings." (He had preserved this calendar and showed it to the interviewer.)

His development of patience as a mode of adapting to the requirements of the situation is extremely interesting. The subject described this process in part as follows:

"We had planned to leave on the 10th of March but by the 10th of March, I had learned patience, something I had never learned before and something I don't have now. You have to understand the nature of the people and take things as they come. You can't rush them. I had decided that things would come along. I found that I just had to hold myself down, if things were not going as they should. I forced myself to accept the nature of the people."

Some of the adaptation in becoming more patient is reflected in a dream recounted as follows:

"In this dream, I was quite rank happy. I was the C. O. This was strange because I have never been rank happy. I was a first lieutenant then. In this dream, I got mad when I gave an order and it wasn't obeyed. I finally figured out that this body of men I was commanding was my two legs. They wouldn't move and it made me mad. They were heavy and wouldn't move when I gave the order."

He might also have interpreted that this body of men he was commanding were his rescuers. He apparently made a tremendous adaptation in behaving more patiently, but one wonders if he were not at times quite demanding. He did, however, display a great deal of sensitivity. This sensitivity apparently enabled him to become more patient and to accept the situation with less irritation. It enabled him to communicate with the

natives and to obtain things which increased his comfort. It also made him willing to maintain his security and prevent his discovery by Communists in the neighborhood.

At first, he was aware that his rescuers did not completely trust him. Realizing this, he adapted his behavior to win their confidence. He was also sensitive to the fact that they were afraid of the Communists and were taking a tremendous risk in helping him. He, therefore, cooperated with them in order not to betray their secret. He was cautious not to offend them in regard to the food which they prepared for him. He appreciated the fact that they made special efforts to make his food palatable by such things as flavoring his rice in various ways -- sugar, oysters, clams, some kind of "brown stuff," etc. He was aware that their own lives were hard and was hoping that he could find some way that he could help them obtain some things which would make life easier for them.

In at least one respect, he was never able to modify his behavior to accept the mores of his rescuers. This was in regard to modesty. He was cognisant of this cultural difference all along, but the inhibitions from his childhood training were apparently too strong. Even during the final lap of his rescue, when he was on a boat with 14 Koreans, he was unable to relieve his bowels for days. His stomach pained him severely. The old man discovered this and urged him to squat over the edge of the boat, but he could not bring himself to do this. Finally the old man secured a crock for him and ran everyone else out of the cabin.

In summary, it might be said that the interview gives evidence of the subject's decisiveness, ingenuity, personal resourcefulness, patience, sensitivity to the feelings of his helpers, and ability to adapt to the requirements of the situation. It further emphasizes the endangering effects of handicapping childhood anxieties, panic, impatience, and inhibitions. It also demonstrates how one can modify his usual behavior to adapt to a survival situation, particularly if he recognizes a tendency in himself which endangers his life.

On the basis of the interview, Q-sorts were made by three persons participating in the interview. The four most and least characteristic statements as judged by the interviewers are as follows:

<u>Most Characteristic</u>

He spends a good deal of time thinking about and planning his future.

He likes sympathy when he is sick or depressed.

He has developed a good deal of self-control.

He can take a lot of physical punishment or discomfort.

Least Characteristic

I feel it is safer to trust nobody.

At times, I get so mad I have to smash things.

I usually say "no" when others offer to assist me.

I go out to meet trouble rather than try to escape it.

These judgments emphasize the adaptive nature of his behavior — accepting discomfort, continuing to plan, controlling dangerous aggressive tendencies, willingly accepting assistance, and avoiding difficulty by making concessions and exercising control.

Self-Evaluations

The subject was administered the already described Q-sort twice, each time with different instructions. First, he was instructed to use the sort to describe himself as he usually behaves.[3] After about two hours of other activities, the subject was re-administered the sort with the instructions to describe himself as he behaved during his survival experience. He appeared to be able to follow these instructions with ease.

If the first sort may be considered as a measure of the subject's personality as it is usually expressed and if the second is a measure of his personality as it was expressed during the survival interlude, then the coefficient of correlation between the two should yield an index of the extent to which he had to adapt in order to survive. In this case, the coefficient of correlation is 0.22 between the two sorts. Even without comparative data, such a low relationship would indicate that a fairly extreme adaptation was made. When compared with other cases, it becomes even more impressive.

The picture of the amount and nature of the adjustment becomes clearer when the specific items are examined. Items for which there are differences of three or more standard deviations may be regarded as representing a very high degree of adaptation and items for which there are differences of two standard deviations may be considered significant, though not extreme, adaptations. Such items are listed below with the direction of the adaptation indicated.

Very High Degree of Adaptation

(First number is rating of usual behavior; second number is rating of survival behavior.)

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3 An attempt was made to get him to describe himself as he behaves now and as he used to behave before going into combat in Korea. He was unable to make this differentiation and no further attempt was made to have subjects make these two sorts.

I am very restless and impatient (1 to 6).

I am more apt to give in than to continue the fight (6 to 2).

It takes a great deal to make me angry (7 to 3).

I have a good appetite and enjoy almost every kind of food (7 to 3).

I have developed a good deal of self-control (6 to 3).

I have intense likes and dislikes (3 to 6).

Moderate Degree of Adaptation

I am usually the one to make the necessary decisions when I am with another person (4 to 6).

In matters of conduct, I conform to custom (3 to 5).

I enjoy a good hot argument (3 to 5).

I accept suggestions rather than insist on working things out in my own way (4 to 2).

I do a great many things just to avoid criticism (6 to 4).

I have a fear of high, steep places (3 to 5).

I go out to meet trouble rather than try to escape it (4 to 6).

I usually say "no" when others offer to assist me (5 to 7).

I feel things deeply and personally, and am sensitive to the deeper feelings of others (5 to 3).

In a tight place, I can usually find some way of getting out that is satisfactory (2 to 4).

I feel the future is pretty hopeless (7 to 5).

I feel it is safer to trust nobody (6 to 8).

Sometimes, I worry about things and can't get to sleep (4 to 6).

From the above data, the following statements might be made about the adaptation which the subject found necessary for survival, at least according to his own perception. Usually a very restless and impatient person, he found that he had to make an extreme adaptation and become very patient.

From the interview, it is apparent that this was a somewhat gradual process and partakes of some of the properties of "adaptation" in the sense of "becoming accustomed to." He infers that even near the beginning of his experience, he could not have accepted some of the monotony and disappointment he was able to take in stride later on. Usually a rather obstinate and stubborn person, he found it expedient "to give in" rather than to continue fighting stubbornly. He found that he could not afford to become angered easily and that he had to learn to like foods he would not ordinarily eat. He also had to become much more self-controlled and to put aside some of his strong likes and dislikes.

He had to allow others to make decisions for him to a greater extent and to accept the suggestions of others rather than to insist upon doing things in his own way. Conformity to custom became a much less characteristic aspect of his personality. As he sees it, fear of high places became less characteristic of him, but his behavior during the inflight emergency would not support this judgment.[4] He became more sensitive to the deeper feelings of others and more willing to trust others. He was naturally more pessimistic about the future but was not bothered by sleeplessness to as great an extent as usual. Ability to find a satisfactory way out of tight places was considered by him as an important usual characteristic of himself, but the survival experience apparently shook his self assurance. Evidently, he has continued to be chagrined that he was unable to make his own way out to safety and had to accept someone else's help.

The Biographical Inventory.

The subject is 31 years old, native of Pennsylvania, married, and the father of one son. He was graduated from High school and has spent practically all of his adult life in the Air Force.

The following brief personality sketch[5] was prepared on the basis of responses to the Biographical Inventory alone:

"This individual has long had habits of independence and self-reliance with the result that he adjusts to new situations with ease. Despite this general adaptability, he shows some suspicion of foreigners, which may be a function of his foreign experience having been entirely while in service with a resulting gap between him and foreigners. He comes from a home which, although physically broken by the death of his father, has been psychologically and socially cohesive, a home in which a variety of activities were shared by family members, including social, economic, and other activities. Outside of the home, and in it, he has generally felt a part of the group and has had evidence of being accepted

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4 The subject indicated that he experienced rather severe fear throughout the flight from his home base to Stead Air Force Base, fearing that the aircraft would go down.

5 Prepared by Dr. Donald E. Super.

by his peers by occasionally being elected to offices. He was reared in a small town, where he experienced the outdoor activities that come easily with small town living,including camping and working on a farm. He has had little experience in roughing it, but neither has he experienced outdoor living of an ultra sophisticated or protected variety.

In an attempt to interpret and to quantify the Biographical Inventory data, Q-sorts were made by three judges who had access to no other data about the subject. Statements judged as most and least characteristic of the subject are listed below.

Most Characteristic

In a tight place, he can usually find some way of getting out that is satisfactory.

He is usually the one to make the necessary decisions when he is with another person.

He has developed a good deal of self-control.

When he has to act, he is usually quick to make up his mind.

Least Characteristic

He feels that the future is pretty hopeless.

He has a fear of water.

He has intense likes and dislikes.

He dislikes having people around him.

When these ratings are viewed against the background of his survival experience, two major areas of adaptation are highlighted — dominance and sociability. Being willing to let others make decisions for him and living alone must have been difficult adaptations.

The Rorschach

The Rorschach record was scored independently by two psychologists. Differences in scoring were then arbitrated and agreement reached. Each of the scorers then completed Q-sorts based only on the Rorschach data. The following personality sketch was prepared by one of the judges:

"Through his Rorschach record, the subject discloses high potential intellectual level in his associational content and in his overall approach to a new situation. His associational content is varied without being outstanding and his ability to organise is also high without being outstanding.

"His responses suggest that, faced with a new situation, he observes and reacts first to all of the main aspects of the situation. A moderately careful analysis of the main details then follows and almost no consideration is given to little details. Similar behavior can be expected in real life. Presented with a decision to make, a choice of a new house, a transfer, a school for his boy, he can be expected to examine the total aspects of the situation, such as the location of the house, distances, rent, etc. He would then consider the larger details, such as the number of rooms, kind of heating system, etc. He would pay almost no attention to smaller details, such as the arrangement of the electrical outlets, the type of shower curtains, etc.

"The content of his responses indicates at the same time a high level of intelligence and a wide variety of interests (trees and flowers, totem pole and coat of arms, fountain and garden).

"He appears to be a methodical person. His sequence of whole and then details indicates that this is his usual way of behavior: true, logical and pedantic orderliness. In a survival situation, he can be expected to behave accordingly. He would size up the situation, think of all the pros and cons of the alternatives, and make a logical decision based on the main aspects.

"He appears to be a man who conforms to society and accepts its standards and demands. He may be stiff and restrained, reacting only to the most obvious. Although he appears to have good interpersonal relationships, he is not likely to initiate new friendships, for instance with a next-door neighbor. If approached, however, he will answer warmly and a new friendship may start. He wants good interpersonal relationships and is likely to accept and welcome new friendships.

"He appears to have a capacity and desire for warm, deep interpersonal relations. In spite of his stiffness, the subject is rather emotional and spends much energy trying to control his inhibitions. This struggle impairs and decreases his imaginative life, produces anxiety and feelings of inferiority. One of the outstanding characteristics of his personality appears to be the struggle between his emotions and the strict control of his drives. He desires warm interpersonal relationships and tries to control his stiffness and inhibitions. He would like to be the life of the party but is unable to be so.

"In summary, the subject is an intellectually superior individual with rather good contact with reality. He is a conformist, who accepts almost without discussion the norms and demands of his society. His struggle between inhibitions and desires for warm human relationships is likely to continue to be a predominant characteristic of his personality.

"In a survival situation, as in every-day life, he can be expected to behave realistically: to control his emotions and inhibitions according to the demands of the situation. He will, however, be more successful in controlling his emotions because this is his usual approach. For example,

in an interrogation, he can be expected to withstand the hammering of the interrogator more than most men. He is not likely to blow up, but rather to answer in a quiet and restrained manner."

In an attempt to quantify the Rorschach data, two judges independently performed Q-sorts based on the Rorschach data alone. By combining judgments, the following characteristics emerged as most and least characteristic.

Most Characteristic

In matters of conduct, he conforms to custom.
He is very restless and impatient.
He worries a lot about his ability to succeed.
He usually makes a plan before he starts to do something.

Least Characteristic

At times, he gets so mad that he has to smash things.
He has a fear of water.
He has a fear of high, steep places.
He likes being in the thick of action.

Comparison with Ideal-Survivor Sort

Several interesting insights emerge from a study of the major discrepancies between the "ideal survival personality" as determined by the sorts of the ten judges and the self-sorts. Major discrepancies will be defined as differences of three or more standard deviations. First, let us consider the major discrepancies between the "ideal survival personality" of the subject. The largest discrepancy occurred for the characteristic "I am more apt to give in than to continue the fight." The judges rated this statement as least characteristic (the one statement rated as "8") of the "ideal survival personality," while the subject rated it as highly characteristic (a rating of "2") of himself during the survival situation. The subject and the judges may interpret the statement in somewhat different ways. From the point of view of the subject, he would not have survived had this statement not been so highly characteristic of himself. It was necessary that he place himself into the hands of his rescuers and follow their instructions. At times, he found this very difficult to do. It was against his customary way of behaving. Yet, he realized that his survival depended upon it.

A similar tendency is found in regard to another item in the major discrepancy category "I accept suggestions rather than insist on working things out in my own way." The judges rated this statement as somewhat uncharacteristic of the "ideal survival personality," while the survivor rated it as highly characteristic of himself. Continuing stubbornly or refusing to accept suggestions might conceivably have survival value in instances where one is on his own resources and where there is no alternative but to continue, or if the advice is undependable. In most survival experiences, however, such behavior would probably be foolhardy and greatly endanger chances of survival.

A rather large discrepancy (four standard deviations) was also found for the item "I am rather dependent upon the presence and judgments of my friends." In the subject's survival experience, it was necessary to accept the care and trust the judgment of his friends. His experience, however, may be unusual, and being overly dependent would be dangerous in most survival situations. A similar situation is reflected in another major discrepancy statement "I feel fresh, vigorous and ready for anything, most of the time." Ideally, this statement would be characteristic of the survivor. Illness, injury, and the necessity for hiding in a hole made the situation different for the subject and made a more passive, dependent role appropriate. The discrepancy in regard to the statement "I feel it is safer to trust nobody" (8 - 5) can be explained in the same way.

"When I have to act, I am usually quick to make up my mind" is another statement for which there is considerable discrepancy. The subject considers this statement uncharacteristic of his survival behavior while the judges consider it an important characteristic. While this characteristic may not have been important during the long weeks of hiding and waiting, it was important during the in-flight emergency and the evasion phases of his effort. The evidence would tend to support the subject's self-rating, but it also suggests that the lack of this characteristic may have endangered the crew's chances of survival when the bailout was delayed.

The subject considered the statement "I am rarely very excited or thrilled" uncharacteristic of himself, while the judges rated it as characteristic. This discrepancy can be explained in the same manner as the foregoing. Another discrepancy which is a function of the peculiar nature of the subject's survival situation occurs in regard to the following statement "Most of the time, I would rather sit and daydream than to do anything else." The subject considered this statement characteristic of himself, while the judges thought that ideally it should be uncharacteristic.

An examination of the discrepancies between the "ideal survival personality" and the subject's "usual personality" should make it possible to predict the extent and nature of the adaptation a particular individual can be expected to have to make in order to survive. Differences of three or more standard deviations were found for the following six items. (The subject's self-rating of his "usual personality" is given in parentheses and is followed by the corresponding rating of the "ideal survival personality.")

I am very restless and impatient (1, 7).
I have developed a good deal of self-control (6, 1).
It takes a great deal to make me angry (7, 3).
I have a fear of high, steep places (3, 6).
I have a good appetite and enjoy almost every kind of food (7,4).
I am rather dependent upon the presence and judgment of my friends (3,6).

The foregoing data would enable us to predict that in order to survive, this subject would have to make rather marked adaptations by being more patient, more self-controlled, less easily angered, less afraid of high steep places, less finicky in regard to his eating, and more self-reliant. Checking back to the subject's rating of his "survival personality," it is found that he made most of these adaptations successfully.

CASE 2: THE READY TIGER

The "Ready Tiger" is 26 years old and holds the rank of first lieutenant. At the time of his survival and evasion experience, he was an F-80 pilot. He was shot down during the winter and received a back injury and several cuts. He crashlanded on a beach, was assisted by anti-communists, and returned to safe territory within four days.

The Survival Experience

The survival record offers several clues concerning the subject's personality. One of the first and perhaps most characteristic was his ability to maintain calm and to keep adapting to a fast-changing situation, even when death seemed almost certain. His experience is of a type which is especially conducive to the "sky-is-falling" type of panic. He kept going, trying to get as close to friendly territory as possible. His leader kept giving him advice as to what to do. Instead of following this advice blindly, he evaluated it and made his own decisions, in some cases contrary to the leader's advice.

In spite of his independence, however, he maintained communications with his flight leader and kept talking. The record also suggest that he was well-prepared for survival and had a good psychological "set" for survival. He had his .45, blood chit, halazone tablets, and the like ready for use. There is even some indication that this "set" may have operated somewhat automatically during the immediately following the crashlanding. He also demonstrated ability to withstand a great deal of physical discomfort, including food and water deprivation and pain from injuries.

The first clue that the subject is a "ready tiger" occurs at the beginning of the record when we learn that he continued the mission although his wing man aborted a couple of minutes after take-off. The second clue comes from the description of a very aggressive mission. The third is derived from the fact that he kept the aircraft going, in spite of the fact that it seemed "to be on its last leg" and his leader advised immediate bailout.

Statements judged as most and least characteristic are listed below:

Most Characteristic

He has developed a great deal of self-control.
He is usually the one to make the necessary decisions when he is with another person.
When he has to act, he is usually quick to make up his mind.
He can take a lot of physical punishment or discomfort.

Least Characteristic

He doesn't work very efficiently under pressure.
He is more apt to give in than to continue the fight.
He is rather dependent upon the presence and judgment of friends.
Sometimes he fears that he may be injured in an accident.

The Interview

The interview strengthened the inferences made from the record. His individualistic tendencies become quite clear from the information provided by the interview. In spite of this, however, he gave evidence of ability to work cooperatively and gained assurance from the flow of talk between him and the flight leader during the in-flight emergency.

Some of the reasons for his ability to withstand pain and discomfort are made clear by the interview data. During the time he was in combat he maintained a most unusual regimen of physical conditioning. He did a great deal of walking up and down Korean hills, practiced throwing knives, took exercises to build up his chest and arms, and practiced marksmanship with the .45. This was a program of his own, carried out entirely on his own responsibility, in spite of ridicule from other pilots.

These and other facts emphasize his preparedness for a survival emergency. He had made a very careful study of the terrain over which he was flying and had thought out in advance what he would do, if he were ever downed over certain areas. He had made up his mind that he would not be taken prisoner. If necessary, he had planned to "shoot it out" with the enemy. His only fear was that he would be knocked unconscious and would be captured. He was determined to fight as long as possible. Even though survival kits were not issued in his unit, he made up his own kit from what he was able to scrounge -- first aid kit, flares, canteen, Japanese lighter, etc. Even now, he continues his survival preparation and planning. He still practices knife throwing, archery, and marksmanship.

Many evidences of the aggressive, or Tiger aspects of his personality were revealed through the interview. According to his reports, he enjoyed his combat tour in Korea tremendously and at the time of the interview was using every device known to him to effect reassignment to Korean combat. He said that he enjoyed being the hunter and took great pleasure in flying low and hunting out the enemy. There were always plenty of targets and he enjoyed this very much. He was eager for every possible mission. His commanding officer and the flight surgeon were afraid that he would kill himself.

He maintains, however, that he was never in better health. According to him, he gained 10 or 11 pounds, his eyes were better, his ears were better, his heart was excellent, and his digestion was perfect. He volunteered as soon as combat began in Korea and kept sending in his name to the Pentagon. One of the first questions he asked the interviewer was whether or not he knew anyone in the Air Force who might be instrumental in getting him back into combat. He also asked the base commander the same question.

He has a long history of aggressiveness and unwillingness to take "no" for an answer. He grew up in a rural area in Louisiana and did a great deal of hunting and fishing. He bought his own rifle when he was 7 or 8 years old and "spent every dime he earned for ammunition." As a result of his activities, there was not a snake for many miles around his home. He cannot remember ever having been afraid. While he was a junior in high school, he tried to get into the Royal Air Force. At 17, he enlisted in the Navy and was later eliminated from the Naval Air Cadets for some minor infraction of regulations. Following his discharge from the Navy, he entered college and finally managed to enter the Air Force flying program in the second class after World War II. When required to take "R and R" (Rest and Recuperation leave), he would go to Japan and fly Mustangs on combat missions. After he became flight leader, nothing pleased him more than to lead a flight of four F-80's to the assigned target and then go to the border and try to work up a fight with the MIG's.

In spite of his strong aggressive tendencies, strong independence, and dislike for the South Koreans, he was able to make necessary adaptations and submit to the protective care of his rescuers. After a while, he trusted them and was able to relax somewhat. Even under these conditions, however, he exercised considerable self-discipline. He refused food prepared by the Koreans because he had been briefed by his flight surgeon that it was dangerous to eat vegetables from the ground. He also refused to drink water unless it had been treated with halazone tablets. He felt that he was so close to his goal that there was no reason to endanger himself for a little food. He knew that going without for a week would not kill him. He strongly believes in self-discipline. On several occasions, he has gone without food for over 24 hours. He also says that he can drive without fatigue for 36 hours.

The interview also revealed a strong religious tendency. Twice during his survival experience, he prayed very earnestly. Before going down, he prayed, "If you don't mind, God, strain a gut a little, and let me live through this one." After he was down and was walking, he prayed, "Thanks to the Blessed Virgin. If you see fit, keep these Cooks off my neck." He believes that God helps those who help themselves and that one should pray, "If it be Thy will." He still does not drink and believes that this is due to early parental influence and his strong motivation to excel as a fighter pilot. He also appears to be devoted to his wife and 8-year-old son whom he is teaching to drive.

He appears to have a tremendous vitality, craving activity and chafing tremendously under conditions of inactivity. This is reflected in his life history, by his behavior in the interview, and in his present way of living. He says that he always awakes feeling fresh and vigorous, even if awakened in the middle of the night.

He likes the Air Force and says that he would stay in even if he had a million dollars.

The following statements in the Q-sort were judged to be most and least characteristic of him:

Most Characteristic

He has developed a good deal of self-confidence.
He is usually the one to make the necessary decisions when he is with another person.
He feels fresh, vigorous, and ready for anything most of the time.
In a tight spot, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He doesn't work very efficiently under pressure.
He has a fear of high steep places.
Sometimes he fears that he may be injured in an accident.
He feels that the future is pretty hopeless.

Self-Evaluations

The coefficients of correlation between the subject's two self-evaluations is .43. This suggests that it was necessary for him to make considerable adaptation but not as extreme adaptation as was required of Case 1. The nature of his adaptation, as he sees it, is shown by the more extreme discrepancies between the two sorts listed below:

Very High Degree of Adaptation

I have difficulty controlling my sexual impulses (3 usually to 6 in survival situation).
I worry about my ability to succeed (4 to 7).
I have a fear of high, steep places (8 to 5).
Sometimes I fear that I may be injured in an accident (7 to 3).
I like being in the thick of action (1 to 4).
I am always thinking of new ways of doing things (7 to 3).

Moderate Degree of Adaptation

I am more apt to give in than to continue to fight (6 to 8).
I accept suggestions rather than insist on working things out in my own way (5 to 3).
I have a fear of water (7 to 5).
I am rather dependent upon the presence and judgment of my friends (6 to 4).
I do a great many things just to avoid criticism (4 to 6).
It takes a great deal to make me angry (6 to 4).
I feel it safer to trust nobody (4 to 2).
I don't work very efficiently under pressure (5 to 7).

In summary, it might be said that the subject's survival experience activated in him fears which are ordinarily not conscious; and made him less anxious to be in the thick of actions at the same time the experience activated in him greater feelings of confidence in his ability to take care of himself successfully. His sexual impulses were pushed into the background and he was driven to invention of new ways of doing things. It stirred up a greater will to continue to fight and made him more willing to accept advice from friends and depend upon them for assistance. At the same time, he acted more in terms of survival needs than in terms of conformity to avoid criticism. He functioned more effectively under pressure and controlled his temper.

Biographical Inventory

The subject's responses to the Biographical Inventory reflect a high degree of early independence, frequency and ease in making changes, and familiarity with the out-of-doors, but a low degree of ease in establishing relationships in small groups, especially outside the family.

He learned to drive a car when he was about 12, bought himself a rifle when he was about 7 or 8, earned much of his own money, became accustomed to being away from home, and the like. He spent his summers swimming, roaming the woods alone, and traveling about on his own.

His family made several moves during his childhood and he always enjoyed changing schools and neighborhoods. By choice, he had few friends and was not bound by attachments of this sort. In grade school, he had a few good friends but no close ones. This has persisted to the present. He says that this is by choice. He did not belong to any clubs in high school and college and did not hold any offices. He belonged to no outside organizations and attended no organized summer camps. He says that he has always been able to have a good time on his own. He enjoys changing from one base to another, even now.

He has always spent a considerable amount of time hunting and fishing, and enjoys stalking game. He reports considerable experience in camping out, butchering animals, taking long hikes, using a rifle and bow and arrow, and sailing boats. He has never worked on a farm, however.

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On the basis of his Biographical Inventory responses, the following Q-sort statements were judged to be most and least characteristic:

Most Characteristic

He can take a lot of physical punishment or discomfort.
Most of the time, he would rather sit and daydream than do anything else.
He usually says "no," when others offer to help him.
He likes being in the thick of action.

Least Characteristic

He feels dissatisfied if he remains unnoticed.
He has a fear of high, steep places.
He feels that the future is pretty hopeless.
He finds it difficult to exclude irrelevant ideas and pin himself down to one line of thought.

The Rorschach

On the basis of the Rorschach data, one of the judges prepared the following personality sketch:

The subject appears to be a man of superior intelligence, but a little inconsistent in his behavior. In his approach, he tends to give greater importance to the total situation and does not give much importance to details. Confronted with a new situation, he is likely to select outstanding details before concentrating on the whole situation. He then proceeds from a general approach to another interpretation. The subject is likely to be very emotional, but exercises a great deal of control. In a tight situation, he can be counted upon to control his emotions to a great extent.

He appears to be strongly motivated and his anxiety level is moderately high and not too well controlled. This anxiety probably lowers his efficiency considerably and he could probably accomplish a great deal more than he does, if he could acquire better insight into some of his emotional problems.

In quantifying the Rorschach data, the judge evaluated the following statements as most and least characteristic:

Most Characteristic

When I have to act, I am usually quick to make up my mind.
I often act on the spur of the moment without stopping to think.
I like being in the thick of action.
I am very restless and impatient.

Least Characteristic

I have a fear of water.
I have a fear of high, steep places.
I am rarely very excited or thrilled.
I dislike having people around me.

Comparison with Ideal-Survivor Sort

For the sake of brevity, the discrepancies between self-evaluations of survival behavior and the "ideal-survivor" sort will be listed but not discussed.

I am restless and impatient (7 ideal - 3 during survival).
I feel it is safer to trust nobody (5 - 2).
I seek amusement and entertainment as a cure for worry (4 - 7).
I usually influence others more than they influence me (4 - 6).
I am usually the one to make the necessary decisions when I am with another person (3 - 5).
I accept suggestions rather than insist on working things out in my own way (5 - 3).
I am rather dependent upon the presence and judgment of my friends. (6 - 4).
I worry a lot about my ability to succeed (5 - 7).
Sometimes I fear that I may be injured in an accident (2 - 4).
I feel that the future is pretty hopeless (7 - 5).
I have a good appetite and enjoy almost every kind of food (4 - 6).

CASE 38 THE PADDLING GUNNER

The subject at the time of his survival experience was a B-29 GFC gunner, held the rank of A/1C and was 25 years old. His crew had completed survival training at the SAC Advanced Survival School at Camp Carson, Colorado, and the entire crew did an excellent job in the survival emergency. The bailout occurred in winter and the subject was separated from the rest of the crew, bailing out about two miles from shore. He made his way to a safe island within five hours, joining the other members of his crew.

The Survival Experience

In general, it might be said that the subject was well trained for survival, used his training, and survived "without much sweat." The record, however, gives a number of interesting clues concerning his personality.

The fact that he was well-trained and was able to use his training, in itself, tells much about him. The entire record gives the picture of a sturdy, well adjusted personality. Much of his ability to avoid panic

during the pre-bailout and bailout phases may have been due to the orderly and well-coordinated behavior of the entire crew. He, nevertheless, performed well his role, keeping the aircraft commander informed from his station. When separated from the crew, he was able to meet emergency after emergency and showed little evidence of panic.

The record also suggests that he is characteristically a responsible and independent individual. Although he was not furnished the items of survival equipment which he had been taught that he should have, he did not let this stop him. He procured on his own responsibility the items of personal equipment which he considered essential.

He gave evidence of feeling at home in the water. Two miles from shore and with no oars in his dinghy, he used his hands to paddle himself ashore.

The record also reflects a constant alertness to determine whether or not he was approaching friendly territory and he did not make his presence known until certain that he was in friendly territory. Throughout the experience, he demonstrated a tendency to rely upon what he had been taught rather than impulse. For example, upon reaching shore the impulsive thing would have been to have kept going as quickly as possible to try to get to friendly troops. He took care, however, to hide his dinghy, take off his shoes and socks and squeeze out his socks, and examine every sign available to determine whether or not he was in friendly territory.

The statements of the Q-sort judged most and least characteristic on the basis of a study of the record are listed below:

Most Characteristic

He has developed a good deal of self-confidence.
He feels fresh, vigorous and ready for anything most of the time.
When he has to act, he is usually quick to make up his mind.
In a tight place, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He doesn't work very efficiently under pressure.
He has a fear of water.
He has a fear of high, steep places.
At times, he gets so mad that he has to smash things.

The Interview

The interview fully supported the evaluation of the subject as a sturdy, well-adjusted individual. It added, however, a considerable amount of understanding of his personality.

The subject reported, "When the emergency occurred, all I wanted to do was just get out of there." At first, this might be taken as an indication of impatience or impulsiveness. When his behavior is studied more carefully, it appears, instead, to be an indication of self-confidence in his ability to survive and his readiness to do whatever is necessary in order to survive. Although he felt a strong urge to get out as quickly as possible, he did not behave impulsively. He performed his duties and participated in an orderly bailout.

Upon hitting the water, he felt relief but did not relax his alertness. Several things had gone wrong and each time he had taken care of them. He had an old parachute, which, according to him should have been junked long ago. He could not get a hold on the risers but he managed a smooth landing in the water and got out of his harness in a flash. He knew how to handle himself in water from almost a life time of sailing off the coast of Rhode Island. There were no paddles in his dinghy and without hesitation he paddled himself ashore with his hands. He also demonstrated his physical endurance and will to survive by continuing to paddle the two miles to land. He became tired at first and thought his arms would drop off. He reported, however, that he soon became accustomed to it and kept going.[6]

His ability to think under pressure was demonstrated by the precautions which he took in choosing a spot to land, blinking a message in Morse code, shooting flare, hiding the dinghy and other gear, choosing the items which would be most needed, squeezing out his socks, etc. He was careful not "to burn his bridges behind him" and was ready for a battle every minute until he was certain that he was safe.

The following statements of the Q-sort were judged by the interviewer as most and least characteristic:

Most Characteristic

When he has to act, he is usually quick to make up his mind.
He has developed a good deal of self-confidence.
He mixes well with all kinds of people.
He is always thinking of new ways of doing things.

Least Characteristic

He has a fear of water.
He worries a lot about his ability to succeed.
He has a fear of high, steep places.
At times, he gets so mad he has to smash things.

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6 This is another excellent illustration of the fact that fatigue and energy expenditure are not directly related. His motivation was strong and he had a plan.

Self-Evaluations

A coefficient of correlation of .78 was obtained between the subject's two sorts, suggesting that he was able to take the survival experience in stride without a great deal of adaptation. There are no deviations greater than two for any statement and only five are of this magnitude. These are as follows:

I feel dissatisfied if I remain unnoticed (5 usual to 7 survival).
I usually say "no," when others offer to assist me (7 to 5).
I am rarely very excited or thrilled (6 to 4).
I stick to a job even though it seems that I am not getting results (3 to 5).
I have a fear of water (5 to 7).

None of these suggest any radical changes, most of them being either in the middle range or at the uncharacteristic end of the scale. Essentially, he states that he was more willing than usual to remain unnoticed, more willing to accept assistance, more excited, less willing to stick to a losing course of action, and less fearful of water. It will be observed that even in ordinary life, these characteristics are not handicapping. For example, he considers himself an "Old New England sailing man" fully capable of taking care of himself in water. As such, he of course recognises the dangers of the water. In his ratings, he appears to be saying that even so, he was less conscious of these dangers and did not give a thought to the dangers of the water.

Biographical Inventory

According to the rationale behind the Biographical Inventory, the subject should be an "ideal survivor." The authors of the test could probably not have simulated a more ideal set of responses. He rates extremely high on all four of the characteristics hypothesized as requirements for survival.

Throughout childhood and adolescence, he was given many opportunities for developing independence of environmental props. He learned to drive a car before he was 12 years old and started driving frequently by age 15. He was permitted to choose his own clothes by the time he was twelve and earned a part of his own money. He frequently took trips away from his family, sometimes for several weeks at a time. He spent much of his vacation time swimming, boating and engaging in other activities with his crowd.

Although the family appears to have been fairly stable, he has become accustomed to making changes with ease. Changing neighborhoods, schools, jobs, and bases has always been easy for him. In a strange place, he is always able to find something interesting to do. In changing jobs, he always went to something better, found it interesting and challenging, and did so with good results.

In spite of his independent habits, he comes from a family which seems to have been very cohesive without being possessive or overprotecting. The family engaged in many activities together, made trips together, and shared

responsibilities. He has always been very much a part of his peer group. He was accustomed to going on trips with groups of boys or men. He has always had several close friends and has felt very much a part of things. He held a few offices in high school and belonged to several clubs.

He has always been a real devotee of outdoor life. He frequently went on camping trips as a boy, attended scout camps, frequently camped out overnight with friends and hunted and fished frequently. All outdoor and survival skills listed on the inventory were checked.

On the basis of the Biographical Inventory responses, the judges rated the following statements as most and least characteristic of the subject:

Most Characteristic

He mixes well with all kinds of people.
In matters of conduct, he conforms to custom.
He prefers the company of gay, amusing, fun-loving people.
In a tight place, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He dislikes having people around him.
He feels that the future is pretty hopeless.
He feels it is safer to trust nobody.
He avoids very close relationships with other people.

Rorschach

The following sketch was prepared by one of the judges on the basis of the Rorschach:

The subject discloses his intellectual potentialities in his emphasis on whole responses, concern for good form or reality, and in a varied associational content. Confronted with a new situation, the subject is likely to observe and examine the total situation and its major aspects and make his decision. The total situation and its major details are important; the smaller details are irrelevant. He is likely to be too quick in making decisions to pay attention to small details. For example, the possibility of a voluntary transfer might arise. He would examine the main advantages and disadvantages of the two situations and would make his decision on the basis of these, without paying attention to minor details such as transportation, packing, unpacking, and the like. Quick decisions, short answers, and an over-all point of view are major characteristics of his personality.

In his associational content, he reveals a variety of interests. Most of these associations are of a geographical and outdoor nature, reflecting interest in his military career and a very extensive outdoor interest and/or experience. Not a great deal of interest in people is indicated.

He is likely to be quite realistic in his thinking and behavior. There is some anxiety but there is strong control. There is emotionality but it is kept under control. He is well balanced between introversive and extroversive characteristics. He is not likely to explode with outbursts of rage in case of disagreement. He can be expected to explain calmly his point of view and to stand for what he thinks is right. His phantasy is rather limited, always giving way to reality and to strong controls.

The following statements were judged to be most and least characteristic of the subject on the basis of the Rorschach data:

Most Characteristic

When he has to act, he is usually quick to make up his mind.
He mixes well with all kinds of people.
He likes being in the thick of action.
He has a good appetite and enjoys almost every kind of food.

Least Characteristic

He feels that the future is pretty hopeless.
He has a fear of water.
He dislikes having people around him.
Most of the time, he would rather sit and daydream than to do anything else.

Comparison with Ideal-Survivor Sort

A comparison with the ideal can be obtained from the following discrepancies between the "ideal" and the subject's self-sort:

I stick to a job even though it seems that I am not getting results (2 ideal - 5 self rating).
I am very restless and impatient (7 - 4).
I am more apt to give in than to continue to fight (8 - 6).
I accept suggestions rather than insist on working out things for myself (5 - 3).
I feel dissatisfied if I remain unnoticed (5 - 7).
I have developed a great deal of self-confidence (1 - 3).
At times, I get so mad I have to smash things (6 - 8).
I am always thinking of new ways of doing thing (3 - 1).

CASE 4: THE "PIED PIPER" OF THE KOREAN BATTLE FRONT

At the time of the subject's survival experience, he was a forward ground controller, 29 years old, and a captain. The incident occurred in the spring and lasted for three days. The group with which he survived included other American personnel, interpreters, and ROK troops.

The Survival Record

The first personality characteristic which stands out in the official record is the subject's decisiveness and ability to lead even those of superior rank. During the hottest part of the fighting, he was able to direct a very complex array of operations which required many decisions. When the situation became hopeless and the other officers were indecisive, he decided that he would try to lead them out. Everyone followed him like the children of Hamelin following the Pied Piper. He relates that on a later occasion he decided that his only chance of getting away was to swim across a river. When he reached the other side, he saw that about 1100 ROK's were attempting to do the same thing.

A second outstanding characteristic of the subject appears to be his ability to recover, when all of his "props" have been knocked from under him. Finding a bridge out, he led them through the ford. He was knocked out of his jeep and was hit in the jaw, but he kept going. When his radio was ruined, he found another and soon had it operating and was directing air strikes. His jeep was hit and set afire; he jumped into a ditch and tried to reassemble the confused and panicky ROK's.

Although the subject made many quick decisions, he was not acting impulsively. Instead, he was making use of his training. This is clearest during the evasive phase of the experience. He held a conference and it was decided to divide the group, now including 5 Americans and some 600 ROK's, into small units. He used good observation techniques, provided periods for rest, and took many effective security precautions.

The subject manifested tremendous physical stamina. Near the end of the evasion phase, others in the group were unable to continue and it was necessary to leave them behind.

The interviewer who prepared the record stated that information received from other sources indicates that the subject was rather modest in his narration of events that occurred during the evasion.

On the basis of the survival record, the following statements were judged as most and least characteristic:

Most Characteristic

He is usually the one to make the necessary decisions when he is with another person.
He usually influences others more than they influence him.
He has developed a good deal of self-confidence.
In a tight place, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He doesn't work very efficiently under pressure.
He is more apt to give in than to continue to fight.
Sometimes he fears that he may be injured in an accident.
He dislikes having people around him.

The Interview

The author was away on TDY at the time this subject was studied and the interviewer conducted only a brief interview, substituting instead a number of additional psychological tests. A few new insights into the personality of the subject are provided, however.

The record gives no clues as to why he was willing to take risks and kept going with seemingly almost limitless energy. In the interview, he revealed that he had been a POW during World War II and was determined that he would not be captured. He reveals that he was very scared, very mad, and almost hysterical, but he did not want to give up without fighting with everything he had. With him it was an all-out effort.

He also explained his philosophy about assuming leadership of the group. He said that he knew what he was going to do, unless someone else had a more feasible solution. He believes that frequently the "day is lost" because they stand around trying to make up their minds. By the time a decision has been reached, it is too late.

In the interview, it was also revealed that the subject is single, has a bachelor's degree, and has completed two years of graduate study in psychology and economics.

The following statements were judged by the interviewer as most and least characteristic of the subject:

Most Characteristic

He usually influences others more than they influence him.
He is usually the one to make the necessary decisions when he is with another person.
He likes being in the thick of action.
In a tight place, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He is more apt to give in than to continue to fight.
He accepts suggestions rather than insist on working out things in his own way.
He feels that the future is pretty hopeless.
Most of the time, he would rather sit and daydream than do anything else.

Self-Evaluations

The coefficient of correlation of .72 between the two sorts suggests that little adaptation was required of the subject in order to survive. The nature of the adaptation is reflected in the following list of discrepancies between the two sorts:

I worry a lot about my ability to succeed (2 usual to 5 survival).
I can take a lot of physical punishment or discomfort (5 to 3).
I find it safer to trust nobody (7 to 5).
Most of the time, I would rather sit and daydream than to do anything else (5 to 7).

Apparently he was so busy doing something about his situation that he had no time to worry about his ability to succeed — he had to take the chance. Also, there was no time to worry about physical discomfort nor to daydream. He also had to depend upon himself and did not feel that he could trust others, both because they were unable to make decisions and because there were some North Koreans in the group whom he did not fully trust.

Biographical Inventory

The responses of the subject on the Biographical Inventory indicate a relatively high degree of adequacy in all four of the areas involved in its rationale.

In early adolescence, he exhibited many signs of independence. He started driving a car by age 12 and was driving frequently at about 15, started a bank account at about 12, started selecting his clothes at about age 16, and started taking trips away from home without the family by age 10, at times for several weeks at a time. In a strange town, he is always able to have a good time on his own.

The subject early became accustomed to making changes. His family moved 2 or 3 times a year and covered many parts of the country. He changed schools frequently and always found these changes easy enough to make. He enjoyed living overseas and enjoyed studying the ways of the people. He found changes in jobs challenging and interesting, and he was always successful in these changes.

Apparently, he has always felt very secure in his group — both his family group and his peer group. His family functioned as a cohesive unit and engaged in many activities together. He was the oldest of three sons and admits that he probably did more than his share of talking in the family. He has always had several close friends as well as many good friends. In high school and college, he was a member of several organizations and held offices in a number of them.

He has always engaged in a variety of outdoor activities and has achieved a large number of outdoor skills. He checked all of the outdoor activities except hunting and butchering an animal.

The subject was administered a set of supplementary leadership questions and achieved a very high leadership rating. In school, other students usually expected him to have ideas about what to do and how to do it. It has been the same way in service. In high school, college, and in service, he has captained athletic teams. In civilian life, he worked as an athletic coach, playground director, and camp counselor. He also served as a scoutmaster. He has also coached athletic teams in service and likes to help new men get started right.

On the basis of the Biographical Inventory, the following statements were judged to be most and least characteristic:

Most Characteristic

He feels fresh, vigorous and ready for anything most of the time.
He is usually the one to make the necessary decisions when he is with another person.
He mixes well with all kinds of people.
In a tight place, he can usually find some way of getting out that is satisfactory.

Least Characteristic

He dislikes having people around him.
He feels that the future is pretty hopeless.
He feels it is safer to trust nobody.
He doesn't work very well under pressure.

Rorschach

The following analysis was prepared by one of the judges on the basis of the Rorschach data:

"The percentage of the popular responses and the quality of the form and movement responses indicate an intelligence at about the high average level. A fairly low proportion of whole responses and a high percentage of major detail responses suggest a concern with practical problems and a fairly low capacity for abstract thinking, as well as low integrating and organizing ability. Strong determination and will are also noted. The succession is loose, indicating a somewhat un-methodological approach.

Good control and reasoning ability are indicated by a moderately high percentage of form responses. This, however, is by no means excessive, and constriction is not indicated. He is somewhat introversive and a lack of sensitivity is indicated by the absence of diffusion and texture responses. In view of the introversion, this deficiency very likely manifests itself in interpersonal relations. An appreciable animal per cent indicates a certain lack of flexibility and adaptability.

Emotional impulses represented by color-form are strong, but these impulses are balanced and held under control.

In summary, this is a person of somewhat above average intelligence, but not particularly concerned with abstract or original thinking. He is capable of strong emotion, but these emotions are usually held under control and he is somewhat lacking in sensitivity, tact, and flexibility. He is a rather aggressive person and is concerned with interpersonal relations.

The analyst judged the following statements as most and least characteristic:

Most Characteristic

He mixes well with all kinds of people.
He is usually the one to make the necessary decisions when he is with another person.
He usually has a plan before he starts to do something.
He feels fresh, vigorous and ready for anything most of the time.

Least Characteristic

He is rather dependent upon the presence and judgment of his friends.
He feels things deeply and personally, and is sensitive to the deeper feelings of others.
Most of the time, he would rather sit and daydream than to do anything else.
Sometimes, he worries about things and can't get to sleep.

Comparison with Ideal-Survivor Sort

Additional insights are provided by the following list of discrepancies between the ideal sort and the subject's self-sort of his survival behavior:

I am very restless and impatient (7 ideal - 3 self rating).
I usually influence others more than they influence me (4 - 2).
In matters of conduct, I conform to custom (4 - 6).
I accept suggestions rather than insist on working things out in my own way (5 - 3).
I spend a good deal of time thinking about and planning my future (3 - 5).
I go out to meet trouble rather than try to escape it. (5 -3).
I often act on the spur of the moment without stopping to think (6 - 4).
I usually have a plan before I start to do something (2 - 5).
I like being in the thick of action (4 -2).

CASE 5: THE SEAFARING TIGER

This subject, at the time of his survival experience, was an F-80 pilot, a first lieutenant, and 25 years old. He was shot down during a MIG-15 fight, ditching about one-half mile off shore. The situation required that he keep to sea for the greater part of his four-day survival experience. Finally, he was rescued by anti-communists, given food, and assisted in his escape.

The Survival Experience

One of the first characteristics suggested by the survival record is a lack of fear of the water. When he realized that he would have to crash he headed back for the water, because he figured that this offered the best chance of crashing successfully. Boats approached even before he got into his dinghy. He stopped swimming and let his head barely remain above water in order not to attract attention. Only after nightfall did he open his dinghy. He saw searching parties on shore and still thought that his best chance was to keep to sea and use his signal mirror on passing aircraft. When boats approached, he stopped paddling and covered the dinghy with the dark blue cover until they passed. Even during eight thunderstorms, he managed to maintain calmness and control panic. He says that he received his biggest scare on the second night when a big fish came up under the dinghy and scraped his back across it three times. He quickly pulled his hands inside and stopped paddling. He was worried but did not panic.

On several occasions, he demonstrated good ability to make decisions under stress. One of the first was to head for water. Later, when he found it difficult to float, he got rid of some of the weight. His decision not to get into the dinghy until nightfall, to keep to the sea, and to button up the cover of his dinghy and ride out the storm are other examples. Rather than follow impulse, he used his survival training. For example, he was careful to use his drinking water conversion kit to remove the salt from the water. He checked all of his survival equipment and blew up his dinghy when he found that it had leaked during the first night.

After he was rescued, he showed his ability to adapt readily to the food offered. He found that the octopus stew was excellent. "We all ate, smacking loudly, and talked by motions. The next day, he also found their rice and shell fish to be fine.

On the basis of the record, the following statements were judged to be the most and least characteristic of the subject:

Most Characteristic

He has developed a good deal of self-confidence.
He mixes well with all kinds of people.
In a tight place, he can usually find some way of getting out that is satisfactory.
He can take a lot of physical punishment or discomfort.

Least Characteristic

He doesn't work very efficiently under pressure.
He has a fear of water.
He is very restless and impatient.
He feels that the future is pretty hopeless.

The Interview

Unfortunately, as for Case 4, only a brief and apparently very superficial interview was conducted. A few interesting side lights, however, are provided.

The subject indicated that he was very excited during the MIG fight -- not the panic-like excitement but the excitement which accompanies enjoyment. Even after he realized that he was going to do down, he determined to put up a good fight. He kept too busy to think about the danger.

The subject maintains that he kept calm during the time that he was on the sea. He advises that to accomplish this a man should keep thinking about what he will do next and keep busy. He says that if he had become panicky he would have been captured by the enemy. His advice is to start doing something and "keep on," keeping quiet and staying out of sight. He maintains that loneliness comes only with fear and that both can be avoided if you keep busy figuring out what you have, what you have to do, and how you are going to do it.

The following statements were judged by the interviewer to be most and least characteristic of the subject:

Most Characteristic

He usually has a plan before he starts to do something.
He likes being in the thick of action.
In a tight place, he can usually find some way of getting out that is satisfactory.
He is always thinking of new ways of doing things.

Least Characteristic

He often acts on the spur of the moment without stopping to think.
He avoids very close relationships with other people.
He finds it difficult to exclude irrelevant ideas and pin himself down to one line of thought.
He doesn't work very efficiently under pressure.

Self-Evaluations

The coefficient of correlation of .47 between the subject's two self-sorts indicates that considerable, though not extreme, adaptation was required for survival. The following list of statements for which there are discrepancies will describe the nature of this adaptation:

I avoid very close relationships with other people (8 usual to 4 survival).
I feel things deeply and personally, and am sensitive to the deeper feelings of other (1 to 4).
I feel it is safer to trust nobody (7 to 3).
I dislike having people around me (7 to 4).
I enjoy good food (2 to 4).

I prefer the company of gay, amusing, fun-loving people (3 to 5).
I have developed a great deal of self-confidence (3 to 1).
I go out to meet trouble rather than try to escape (4 to 6).
I often act on the spur of the moment without thinking (6 to 8).
I stick to a job even though it seems that I am not getting results (4 to 2).
I am very restless and impatient (5 to 7).
I can take a lot of physical punishment or discomfort (4 to 2).

In summary it might be said that his most marked adaptations had to be made in the area of social relationships. Ordinarily a gregarious, fun-loving chap, he found himself having to adapt to social isolation. For two days, it was necessary for him to avoid human contacts and this must have been a difficult adaptation for him to have made. He also found a greater degree of self-confidence and found himself more deliberate and less impulsive in his actions -- avoiding rather than meeting trouble head-on, not acting on the spur of the moment, and being less impatient. He also found himself having to forego immediate gratification of pleasure to a greater extent than usual.

Biographical Inventory

The subject was reared on a dairy farm in New York State and completed high school. The process by which he developed his independence is not made clear by the Biographical Inventory. He did not learn to drive until he was 17 or 18 and did not own a car until he was over 21. He did not start a bank account until he was over 19 and started selecting his own clothes when he was about 17. He did, however, take trips away from home without his family before he was 10 and sometimes these trips lasted for several weeks or more.

The Biographical Inventory reflects a rather high degree of ease in making changes. His family moved at least once during his childhood and he found changes from one school to another easy. He found living overseas easy and doesn't mind changing bases. He enjoys looking for new places to live. In a strange town, he feels a little lonely but usually finds something to do.

He appears to have enjoyed considerable security in his family and peer groups. His family seems to have been a very cohesive group and participated in many group activities. He appears to have been very gregarious and always had several close and many good friends. In high school, he was a member of several clubs and held offices in some of them.

His outdoor experience appears to have been fairly extensive, though not extremely so. He occasionally went hunting and fishing and camped out overnight. He has had experience in butchering animals, using an axe, shooting a rifle and shotgun, and climbing mountains.

The following statements were judged to be most and least characteristic of the subject:

Most Characteristic

He likes being in the thick of action.
He usually influences others more than they influence him.
He mixes well with all kinds of people.
He seeks amusement and entertainment as a cure for worry.

Least Characteristic

He is rather dependent upon the presence and judgment of his friends.
He has a fear of water.
He feels it is safer to trust nobody.
He dislikes having people around him.

Rorschach

The subject appears to be an individual of somewhat better than average intelligence, with primary emphasis upon the practical and concrete rather than the abstract. Minor details are likely to escape his attention. He is likely to be very realistic and not very imaginative in his thinking. He may be expected to be conforming to social and military demands. He is rather extroversive and is likely to have good rapport with his environment. His interests, however, are somewhat limited and his inner resourcefulness somewhat restricted.

The following statements were judged to be most and least characteristic of the subject:

Most Characteristic

He usually influences others more than they influence him.
In matters of conduct, he conforms to custom.
He prefers the company of gay, amusing, fun-loving people.
When I have to act, I am usually quick to make up my mind.

Least Characteristic

He is rather dependent upon the presence and judgment of his friends.
He spends a great deal of time thinking about and planning his future.
He goes out to meet trouble rather than try to escape it.
He feels that the future is pretty hopeless.

Comparison with Ideal-Survivor Sort

The following list indicates the discrepancies between the "ideal" and the subject's self-sort of his survival behavior:

I am usually the one to make the necessary decisions when I am with another person (3 ideal - 5 survival self-rating).
I am more apt to give in than to continue to fight (8 - 6).

I have a fear of water (6 - 4).[7]
I have a fear of physical pain (6 - 4).
I often act on the spur of the moment (6 - 8).
I am rarely very excited or thrilled (3 - 5).
I like being in the thick of action (4 - 6).
In a tight place, I can usually find some way of getting out that is satisfactory (2 - 4).
I feel it is safer to trust nobody (5 - 3).

CASE 6: THE HEAD BUMPER

The subject, at the time of his bailout over enemy territory, was a B-26 navigator and held the rank of captain. The bailout occurred in the spring. The subject incurred a broken leg. It was necessary for him to engage the enemy almost immediately upon reaching the ground, but he was rescued by helicopter after being on the ground for about one and one-half hours.

The Survival Experience

This subject demonstrated ability to tolerate pain resulting from a broken leg. He opened his first-aid kit and with difficulty administered himself a shot of morphine. He then stuck the needle in his clothing so that if he were rescued, the medic would know that he had received a shot of morphine. He tried to remain hidden, taking some more pictures, and reading some of our Psychological Warfare leaflets, further manifesting his resourcefulness and his ability to make the best of the situation.

He manifested his aggressiveness and ability to develop strategy very quickly, when he was surprised by enemy soldiers. Since the area was being orbited by USAF aircraft, the soldiers were anxious to get away as quickly as possible. Since he could only crawl because of his broken leg, the soldiers started to shoot him. He deterred them by saying, "No, you don't want to do that." He detracted the soldier's attention and managed to grab his gun and take him by surprise. Using this man as a shield, the other two soldiers had to get very near him before taking a shot at him. This gave him an opportunity to grab them and bang their heads together. When the officer approached and started taking shots at him, he pretended to be dying, groaning and moaning very loudly. The enemy soldiers then left him in a hurry as they were afraid of the aircraft flying overhead and apparently thought that the subject was dead.

After this, he managed to crawl a considerable distance to be in a better position to be picked up by helicopter. With his broken leg still paining him, this must have required considerable tolerance of pain. Even under these conditions, he maintained good judgment and waved off the helicopter on its first attempt because there was still some firing

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[7] This is interesting since the subject spent a considerable amount of time on water and was willing to stick to the water rather than endanger his safety by landing. It was probably an adaptation that he recognized the very real dangers of the water. It may also be that the subject has associated many fear experiences with being on the water during his survival experience.

on the ridge.

On the basis of the survival record, the following statements were judged as most and least characteristic:

Most Characteristic

He has developed a good deal of self-confidence.
When he has to act, he is usually quick to make up his mind.
In a tight place, he can usually find some way out that is satisfactory.
He can take a lot of physical punishment or discomfort.

Least Characteristic

He doesn't work very efficiently under pressure.
In matters of conduct, he conforms to custom.
He is more apt to give in than to continue to fight.
Sometimes he fears that he may be injured in an accident.

The Interview

Again, this interview was a very brief and perfunctory one. It did, however, reveal that the subject had had a good psychological set for survival. He had studied the aircraft and had planned the best way to bail-out. He was apparently quite deliberate in his actions during the in-flight emergency, acting very rapidly and without panic. He believes that if one thinks out in advance what he will do in an emergency, the behavior will be almost automatic. He believes that the apparently superhuman strength he mustered for dealing with the enemy soldiers following his bailout was due to the effects of the morphine and described his feeling as one of elation and excitement. He attributed most of his success to his tough mindedness and his not giving up. "I just kept plugging," he said. He recognised that he has a "nervous disposition" and has made a habit of consciously trying to exercise control.

The interviewer rated the following statements as most and least characteristic of the subject:

Most Characteristic

He usually has a plan before he starts to do something.
He sticks to a job even though it seems that he is not getting results.
In a tight place, he can usually find some way of getting out that is satisfactory.
He is always thinking of new ways of doing things.

Least Characteristic

He is more apt to give in than to continue to fight.
He has a fear of physical pain.
Sometimes he fears that he may be injured in an accident.
He feels that the future is pretty hopeless.

Self-Evaluations

The coefficient of correlation of .67 between the subject's two self-evaluations would suggest that only a moderate degree of adaptation was required for survival. The following list of discrepancies will serve to describe the nature and extent of this adaptation as seen by the subject:

I avoid very close relationships with other people (5 usual to 2 survival).
I have developed a good deal of self confidence (5 to 2).
I often act on the spur of the moment without stopping to think (5 to 2).
I usually influence others more than they influence me (6 to 4).
I am more apt to give in than to continue to fight (4 to 6).
I usually have a plan before I start to do anything (5 to 3).
It takes a great deal to make me angry (4 to 2).
I am very restless and impatient (3 to 5).

The Biographical Inventory

The subject was born in Minnesota but reared in Oklahoma. He left school before graduating from high school to work in the oil fields of Oklahoma and Texas. He comes from a city background. At the time of the interview, he was divorced and had two children.

At an unusually early age, he developed a very high degree of independence. Before he was 12 years old, he had learned to drive a car, was soon driving frequently and owned his own car. By the time he was 12, he was earning his own money and had started a bank account. At a very early age he also took trips away from home, sometimes for several weeks at a time. He has also been choosing his own clothes since he was 12 years old.

His life has also been characterized by a high frequency and ease in making changes. Changing schools, jobs, and bases has always been easy for him. He also found living overseas quite easy. He has found changing jobs a challenging and interesting experience and has made a number of such changes, all of which worked out successfully.

He has apparently enjoyed a high degree of security in both his family and peer groups. His family was apparently a cohesive one and participated in many activities together. He has always had several close friends and many good friends, feeling right in the middle of things. He frequently went on trips with groups of boys or men, before entering the Air Force.

His outdoor experience has been fairly extensive. He frequently camped out overnight and went hunting and fishing. His outdoor experiences also included butchering animals, taking long hikes, swimming and diving, using an axe, skating, shooting a rifle and shotgun, shooting a bow and arrow, stalking and trapping game, and the like.

On the basis of the Biographical Inventory, the following statements were judged to be most and least characteristic of the subject:

Most Characteristic

He feels fresh, vigorous and ready for anything most of the time.
He mixes well with all kinds of people.
He has developed a good deal of self-confidence.
When he has to act, he is usually quick to make up his mind.

Least Characteristic

He feels that the future is pretty hopeless.
He has a fear of water.
He has a fear of steep, high places.
He dislikes having people around him.

Rorschach

On the basis of the Rorschach record, this subject appears to be highly intelligent. This is indicated primarily by a large number of whole responses, a high percentage of form responses, and a low percentage of animal responses. In his approach to a new situation, he can be expected to concentrate on the total aspects of the situation, forgetting almost entirely the small details.

In his behavior, he can be expected to be highly consistent. He is not likely to fluctuate from day to day but rather to follow a consistent pattern in whatever situation he finds himself.

He appears to be an extroversive person and highly emotional. He is likely to associate quite freely and easily with his peers and to be a well-liked member of his group. He may have occasional emotional outbursts. Being highly emotional, he can be expected to be "nervous" and to exert a great deal of energy in controlling his emotions. His anxiety level, however, appears to be rather low and he is not likely to be moody or depressed.

The following statements were judged by the Rorschach analyst to be most and least characteristic of the subject:

Most Characteristic

He is very restless and impatient.
In matters of conduct, he conforms to custom.
He enjoys a good hot argument.
He likes being in the thick of action.

Least Characteristic

He is more apt to give in than to continue to fight.
He has a fear of water.
He has a fear of high steep places.
It takes a great deal to make him angry.

Comparison with Ideal-Survivor Sort

The following is a list of the discrepancies between the "ideal" and the subject's survival self-sort:

I have a good appetite and enjoy almost every kind of food (4 ideal - 1 survival).
I don't work very efficiently under pressure (7 - 4).
I am more apt to give in than to continue to fight (8 - 6).
I spend a good deal of time thinking about and planning my future (3- 5).
I have difficulty controlling my sexual impulses (5 - 7).
I have a fear of water (6 - 8).
I avoid very close relationships with other people (4 - 2).
I find it difficult to exclude irrelevant ideas and pin myself down to one line of thought(6 - 4).
When I have to act, I am usually quick to make up my mind (2 - 4).
I am rarely very excited or thrilled (3 - 5).
I stick to a job even though it seems that I am not getting results (2 - 5).
I am very restless and impatient (7 - 5).

It will be observed that some of these appear to be irrelevant in the survival experience under consideration, while others appear to have at some time or other threatened the success of the subject's efforts.

DISCUSSION

Now that the six cases have been examined one at a time, a look can be taken at the data as a whole.

Each case appears to support the hypothesis that individuals adapt to the requirements of survival situations, if they recognise the requirement of the situation and if they recognise their own tendencies which are likely to lead them into difficulty.

One approach to the verification of this hypothesis is to compare discrepancies between the two self-sorts against the requirements of the situation as measured by the "Ideal-Survivor" Sort and the description of the circumstances. In each of the six cases studied, such an adaptation seems to have been the "key to survival."

In the case of the Cave Man, it was primarily patience. The subject recognized that he is customarily a very impatient person and that his situation required patience. Unquestionably, his situation demanded patience of the very highest order. Had he not been patient, he would have been captured and his rescuers would probably have been executed. A second adaptation was in regard to eating. Usually a very finicky eater, he recognized that he must eat in order to maintain his strength. Thus, he ate "with good appetite" the food which his Korean friends furnished. In a weakened condition and forced to remain extremely inactive, it might have been a very easy and natural thing for him to have refused the unappetizing food offered. He would soon have become so weakened that he would probably have lost his will-to-survive. Similar statements could be made about his exercise of self-control and his ability to modify some of his strong likes and dislikes.

In the case of the Ready Tiger, it was ability to change customary ways of doing things. Accustomed to staying in the thick of action and remaining extremely independent of others it was necessary for him to get out of the thick of action and to accept available assistance. Accepting this as a requirement of the situation seems to have been very painful to him. This type of behavior was quite counter to his most central personality characteristic, the characteristic upon which he prides himself. Not to have made this adaptation would have been almost certain suicide.

In the case of the Paddling Gunner, it may have been his ability to change his approach when it failed to yield results. He recognized that he usually sticks to an approach even though it does not "pay off." He recognized that he could not do this and survive, so he changed his approach. When one thing did not work, he tried another. As might be expected, there is less such evidence in this case than in the others because his usual characteristics correlate so closely with those of the "ideal-survival" personality.

In the case of the Pied Piper, it was his increased ability to take physical discomfort and assume an attitude of greater self-confidence. Those around him were indecisive and willing to give up. He had been a POW in World War II and was determined to escape capture even at the price of life itself. He had to make it. Physical discomfort was a small price. He was prepared "to go the limit."

In the case of the generally gregarious and fun-loving Seafaring Tiger, it was his ability to tolerate loneliness. Seeing people on shore, his natural impulse must have been to have gone to them immediately. Recognizing the danger of this, he rode out eight thunderstorms, "sweated out" several search parties in boats, and endured the anxiety of a giant fish crawling under his thin rubber raft. All this anxiety could have been ended, at least temporarily, by going ashore.

The Head Banger recognized that he was impatient and "nervous," so in advance he thought out what he could do in various situations. Apparently, with the start that this gave him he was able to summon the courage of a demon possessed and accomplish the apparently superhuman.

An indication that all of the subjects tended to adapt to the requirements of survival is the fact that in all six cases, the coefficient of correlation between the Survival Self-Sort and the "Ideal-Survivor" Sort is higher than the usual Self-Sort and the "Ideal-Survivor" Sort as shown in Table 1.

Table 1

Coefficients of Correlation of "Ideal-Survivor" Sort with Self-Sorts

Case	Self-Sort Usual Behavior	Self-Sort Survival Behavior
Case # 1	.13	.25
Case # 2	.36*	.54*
Case # 3	.61*	.68*
Case # 4	.58*	.62*
Case # 5	.43*	.66*
Case # 6	.39*	.59*

* Significant at the .01 level of confidence

Still another approach is to determine whether or not chances of survival are endangered when adaptations to personality requirements for survival are not made. Although this could be determined only by a study of non-survivors, considerable indirect evidence is provided by each of the six cases. This evidence can be obtained by examining discrepancies between survival behavior and survival requirements in the light of descriptions of the survival situation. Although these individuals survived, they made mistakes which endangered them and might have resulted in capture or death.

The Cave Man's inability to make quick decisions during the in-flight emergency resulted in his crew's waiting almost too long before bailout. Even so, he received severe burns and we do not know what effect this may have had on the chances of survival of the other two members of the crew. His "giving in" resulted in his contacting Communists or at least Communist sympathizers. This would certainly have been extremely dangerous later in the war. It was necessary, however, that he "give in" and be willing to trust his rescuers. His overdependence on others and lack of aggressiveness might have been more dangerous in other circumstances.

The Ready Tiger's impatience and unwillingness to trust anyone else might have endangered his chances of survival. It was probably fortunate that he had been knocked unconscious when he was contacted by anti-communists and rescued. Otherwise, he may have attacked them before ascertaining their friendly intentions. Even though they were helping him, he still did not trust them. Under more perilous circumstances, this might have been dangerous.

The Paddling Gunner, restless and impatient to get ashore, kept paddling with his hands even though he felt that his arms would drop off. Apparently, there was no real reason for this haste. If the distance had been greater and if he had not landed on a "safe island," this impulsive action could have been fatal. He could have been so exhausted by the time he reached shore that he would not have been able to take care of himself.

Similarly, the Pied Piper kept going "pell mell" without planning, meeting trouble headon, keeping pretty much in the thick of action. Only quick decisions, aggressiveness, tremendous courage, and luck brought him through. Even so, he might have brought a larger percentage of his party out alive had he done a little more planning and organizing rather than just letting hundreds of men follow him like the children of Hamelin followed the Pied Piper.

The Seafaring Tiger's increased pessimism and unwillingness to trust anyone might have endangered his chances of survival. The first could have led to surrender to the enemy or to panic. The second could have resulted in refusal of assistance offered by anti-communists.

It appears likely that the Head Banger's inability "to exclude irrelevant ideas and pin himself down to one line of thought" may actually have endangered his chances of survival. If he had been concentrating on making a good parachute landing instead of occupying himself with other thoughts he might have landed uninjured. It was indeed fortunate that he responded to the morphine as he did and was able to deal so aggressively with the enemy soldiers, even with a broken leg.

SUMMARY AND CONCLUSIONS

Intensive case studies were made of the personality adaptation of six survivor-evadees in Korea. The following data were obtained on each case: official evasion and escape report, interview, self-sorts of usual and survival behavior according to Stephenson's Q-technique, Biographical Inventory, and Rorschach. The rationale for each was described. Each set of data was quantified by use of the Q-technique and intercorrelations computed. Intercorrelations were also obtained between a mythical "Ideal-Survivor" sort and the sorts for each of the six cases.

As background for studying adaptations made by the six survivor-evadees, a concept of adaptation in emergencies and extreme conditions was formulated and discussed. There appear to be automatic, survivalistically-oriented tendencies to adaptation, although there are also dangerous tendencies which resist immediate adaptation. Furthermore, the human organism is limited in its capacity for biologic adaptation to conditions such as extreme cold and must resort to other techniques of adaptation or avoidance. In all types of situations, strong motivation, will to-survive, or goal-orientation appear to be extremely important at all stages of adaptation.

Strong support was found for the hypothesis that an individual will adapt to the requirements of survival situations, IF they recognize what the requirements are and IF they recognize their own tendencies which endanger chances of survival.

This finding appears to provide a practical approach for use in training aircrew personnel how to survive in emergencies and extreme conditions. Through lectures and demonstrations they can be taught the requirements for survival in a variety of emergencies and extreme conditions. Through field training in simulated survival situations they can be made aware through effective instructor and self-evaluation of their tendencies which lead them into difficulty. Theoretically, this should give the aircrewman the proper "set" for adapting in emergencies and extreme conditions should he ever be faced with them.

No attempt was made to discuss the methodological limitations as most of these have been presented in preceding reports. The data are simply presented for what they may be worth in suggesting hypotheses concerning the problem of adaptation in survival.

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