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OUR DAILY BREAD – FOOD AND ITS IMPACT ON OPERATIONAL EFFECTIVENESS

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Abstract

The aim of this paper is to present food from a different cultural perspective within the military environment – operational effectiveness. First, this essay offers a definition and an analysis of key concepts of culture within organizations, particularly within a military context, and their effect on an often-overlooked component – food. Then, it examines cultural orientation towards food that affects food preference and, as a result, soldiers' nutritional status. Various sociological aspects that relate to food and food selection are presented including McDonaldisation, vegetarianism, and food ignorance. The importance of these phenomena is considered in relationship to the military framework and their potential impact on operational effectiveness. Historical situations, where food typically had a detrimental result on operations, are presented to support the requirement to consider food in the context of its impact on operational effectiveness. Finally, a model of food and its effect on operational effectiveness is presented.

Well-prepared, appropriate food is one of the principal morale factors that is within the control of leadership. Food has been proven to aid in maintaining morale, which impacts on maintaining a soldier's will to fight. Ignoring the importance of well prepared, appropriate food could be detrimental to operational effectiveness, especially in the multicultural milieu of United Nations and other coalition forces.

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Chapter 1 – Introduction to Food and Culture

> *Culture doesn't save anything or any one, it doesn't justify. But it's a product of man: he projects himself into it, he recognizes himself in it; that critical mirror alone offers him his image.*
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> - *Jean Paul Sartre*[1]

Culture is often overlooked in the context of the military and its effect on operational effectiveness. The importance of culture is frequently underestimated and its relevance is not taken into consideration in the outcome of military operations. The components of life usually associated with culture, the standard cultural differences between various cultures - the arts, the music and the architecture, are not usually considered in the conduct of military operations. However, the cultural orientation of a military force can affect its ability to operate in a variety of situations and is an important factor in dealing with coalition forces or in peacekeeping operations. One of the components of a culture is food. What is considered appropriate food is often specific to one culture and much different from that of another.

Why study culture if you are examining food and its effect on operational effectiveness? There are the thousands of plants and animals that, although they are edible, are or are not considered acceptable for consumption as 'food'. It is our background or culture that determines what is appropriate for us to eat. Also, in many

[1] Jean Paul Sartre, *Les Mots (The Word)*, (1964), as quoted in *Bartlett's Familiar Quotations,* 16th edition John Bartlett; Justin Kaplan, general ed., (New York: Little, Brown and Company, 1992), p 717.

cases, it is also our culture that determines not only what we eat but how and when. Some cultures consider dogs as appropriate for food whereas in other cultures, their role as a provider of companionship as the family pet precludes their place on the dinner table (instead of under it).

The traditional tangible factors of what identifies one culture from another are easily identified – the arts, literature, architecture, etc. The role of food within the culture is often one that is downplayed or ignored except in the context of a celebration or a significant event. The reasons for this could vary from the very nature of food – its perishability, to the lack of 'leftovers' except for some bones for the archeologists to study; to the overall lack of importance food has been afforded by sociologists until the last thirty years.

Food and the provision of food have always been important to an army from both an operational and a logistical standpoint. Getting the right amount of the right food to the right place at the right time is essential. But the food itself is often overlooked.

> The first essential condition for an Army to be able to stand the strain of battle [is an] adequate stock of weapons, petrol, ammunition. In fact, the battle is fought and decided by the quartermasters. Before the shooting begins, the bravest men can do nothing without guns. The guns can do nothing without plenty of ammunition; neither guns nor ammunition are much use in mobile warfare unless there are vehicles with sufficient petrol to haul them.
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> — Field Marshal Erwin Rommel, North Africa, August 1942

In his comments on logistics, what Rommel failed to mention was food. Without food, we cannot survive. Just as we need fuel for our vehicles and ammunition for our weapons, the soldier, sailor or airman requires food to live. In an operational environment, food plays a very important role, not only as the basic sustenance for the solider, sailor or airman, but it also has an effect on his or her ability to perform effectively.

"There's no doubt that army food has a bad reputation. Just watch any war movie or TV show, and chances are you'll see this scene: a bored unshaven Army cook ladles unidentifiable slop onto a plate of some unsuspecting greenhorn soldier (cue audience laughter)."[2] Throughout history, within our culture, food and the feeding of troops whether they are soldiers, sailors or airmen has been glorified and vilified, mostly the latter. Within the military culture, food has been the brunt of many Beetle Bailey™ cartoons, often published in pro military publications, which support the cultural belief that military food is less than adequate. These seemingly innocent cartoons and segments in movies, which ridicule military food, are representative of popular thought on military food. They have served to perpetuate this negative image, even within the military culture.

Few examples of the scientific study of food acceptability within the military exist. In one study, where the home cooked meal rated the highest, the expected acceptability of military food was rated low and in the same range as airline and hospital

[2] James Careless, "Saving Private's Lunch," *Foodservice and Hospitality*, Vol. 36, No 1, (March 2003), p 45.

food.[3] This study was conducted based on perception, not actual tasting. Further, on the extreme negative side, food has often been attributed as one of the root causes of sailors' mutinies. Food has a strong emotive effect on a group, especially when it is either poor quality or non-existent. While people can endure a lot of deprivation, but when deprivation is not required, or not shared equally among the group, or it endures over a long period of time, poor or no food can be a major source of discontent. Food deprivation along with lack of sleep and adequate shelter are often the cause of displeasure.

On a positive note, food has often been the source of marching songs for soldiers and, sometimes, when it was considered to be less than ideal, the source of a common bond or a joke between members of a unit. Napoleon recognized food's importance in his famous and much quoted statement that "an army marches on its stomach."[4] He realized that in order to get his troops to move somewhere they had to be provided with food to give them the energy to get there and once they arrived, food gave them the strength and the will to fight. Today, there is an increased concern about the quality and acceptability of military food, especially in the operational environment. It has been recognized that "…the importance of sound nutrition to the performance of modern, high

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[3] A.V. Cardello and R. Bell. US Army Natick Research Development and Engineering Center, Natick, Mass, unpublished manuscript results as cited in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations*, ed by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 178-179.

[4] John Bartlett; Justin Kaplan, general ed. *Bartlett's Familiar Quotations* (16th edition; New York: Little, Brown and Company, 1992), p 371:3.

technology personnel may be even more critical than in the past."[5] In order to think properly and make sound decisions, a clear mind is required. Good nutrition is one of the factors that have been proven to contribute to this process. An example of the recognition and validity of this conclusion is the support, by school boards, of programs that provide children with a good breakfast and/or lunch to ensure that they learn better.

This is not to suggest that food is the sole motivating factor that affects a soldier's performance; it isn't. There are other factors such as leadership, unit cohesion, adequate rest, physical stamina, and the combat environment itself that also play an important part in the will to fight and to place oneself in dangerous situations. Food does, however, have an important role to play in maintaining the will to fight. "Nutrition influences how well a soldier can train and fight. An optimal diet may be helpful in delaying fatigue, improving performance during training or combat, and avoiding injuries, while certain deficiencies can seriously impair performance."[6] When food is not considered to be 'good', it is not eaten. If it is not eaten, then there may be impairment in an individual's performance. This impairment on individual performance causes a decrease in operational effectiveness. Lack of or poor quality food affects consumption, which in turn affects operational effectiveness.

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[5] Gerald. A. Darsch and Philip Brandler, "Evolution of Rations: The Pursuit of Universal Acceptance, " in *Not Eating Enough: Overcoming Underrconsumption of Military Operational Rations*, ed by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 109.

[6] Carol J. Baker-Fulco, "Overview of Dietary Intakes During Military Exercises", in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations*, ed by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 121.

It is important to examine the various factors that influence food consumption in the operational environment. This paper will provide substantiation to my thesis that well prepared, appropriate food has a positive effect on operational effectiveness. Well-prepared, appropriate food can be summarized as food that is correctly prepared and served in the context of a particular situation.

In North American society, food is abundant and it is often taken for granted unless there is a threat to the food supply. Perhaps it is this abundance that has caused us to give food no more than a cursory examination in terms of its impact on culture. This paper will explore why food has often been taken for granted from a cultural perspective and several theories will be provided as to the reasons for this oversight.

First, this paper will examine culture in general terms of its definition, its function and the effect it has on certain components, such as food. Then, culture will be examined in terms more relevant to an organization, with emphasis on military organizations. It will look at the importance of food as a component of culture and review some of the current sociological topics regarding food such as McDonaldisation, vegetarianism, and food ignorance. The relationship of these topics and their potential impact on military feeding, which in turn influences operational effectiveness, will be explored. Then, some historical material will be provided to support the requirement to consider food in the context of its effect on operational effectiveness. Finally, the effect of food on operational effectiveness will be modeled.

Except where it is relevant to this paper, the nutritional qualities of food, either specifically or generally, will not be included as part of the discussion. Specific foods or certain groups of foods may, however, be used to illustrate examples. It is assumed that providing a diet based on Canada's Food Guide to Healthy Eating[7] will meet the recommended nutrient intakes for the average military person. The aim of this paper is not to provide a treatise on the merits of healthy eating but rather to present food from a different cultural perspective within the military environment - operational effectiveness.

[7] Canada, Health and Welfare Canada. Cat No. H39-253/1992E *Using the Food Guide – Canada's Food Guide to Healthy Eating*. Ottawa: SSC, 1992.

Chapter 2 - Culture

Culture Defined

How does one define a culture? The dictionary definition of culture does not appear to encompass all that a culture is: "…customs, achievements, etc of a particular civilization or group (Chinese culture)…"[1] When one reviews the academic literature, it is evident that there is a great divergence on what constitutes culture. Often, what passes for a description of culture is dependant on the writer's orientation. A variety of academic backgrounds including sociologists, organizational theorists, historians, anthropologists and political scientists are all involved in the study of culture and each brings their own biases as to the definition of what constitutes a culture. Pheysey, who studies culture from the organizational perspective, defines culture as, "a way of seeing that is common to many people."[2] This could be interpreted as the view of an aspect of life that is based on an ordinary experience. However, people from different cultures often view or see the same experience in the same way, so there is no exclusivity in this description of culture. As the noted sociologist Gilmore indicates, "There is no current, widely accepted composite resolution of the definition of culture."[3] This is certainly true when one looks for a definition of culture and how it can be applied in the study of food and its relevance within the confines of the culture being studied.

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[1] Della Thompson, ed, *The Pocket Oxford Dictionary of Current English* (Oxford: Clarendon Press, 1996), p 206.

[2] Diane C. Pheysey, *Organizational Cultures: Types and Transformations*. (London: Routledge, 1993), p 3.

[3] Samuel Gilmore, "The Contemporary Debate on Culture," in *Encyclopedia of Sociology*, ed. by M.L. Borgatta. (New York: McMillan, 1992), p 402.

Clifford Geertz, the eminent sociologist and anthropologist, describes culture as "the fabric of meaning in terms of which human beings interpret their experience and guide their action." [4] He goes on to describe that it is not the actual experience itself within the cultural context but the recording of the experience that provides the ability to review and analyze it at leisure. However, he asserts that there is a possibility of error in this analysis in that the interpretation could be somewhat skewed. "Cultural analysis is (or should be) guessing at meanings, assessing the guesses, and drawing explanatory conclusions from the better guesses…"[5] In other words, the examination of a culture is not an exact science but more an interpretive one based on the analytical abilities of the observer. "Conceptualization is directed toward the task of generating interpretations of matters already in hand."[6] This is not to be construed that there is a right and a wrong way to interpret a culture but rather that, depending on the analyst's orientation, there is a wide variance in the reasons for the findings and indeed in the findings themselves. What may be important as a finding in one context when studying culture may have absolutely no relevance in the study of another facet of culture.

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[4] Clifford Geertz, *The Interpretation of Culture: Selected Essays* (United States: Basic Books, a division of Harper Collins Publishers, 1973), p 145.

[5] Ibid., p 20.

[6] Ibid., p 26.

Geertz also asserts that the analysis of a culture is never complete.[7] Culture is constantly evolving, so there is never an end state to cultural analysis. This provides a challenge in the examination of a culture because the analysis is virtually a 'snapshot' in time based on information and observation obtained in a precise period of time. Geertz also contends that, based on his theory, there is never any examination of culture that is exactly correct. Hence, cultural analysis, like beauty, is in the eye (or mind) of the beholder.

Schein, in his examination of organizational culture, defines culture as:

> A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think and feel in relation to those problems.[8]

This means that a group develops its own beliefs, based on their experience as a group of what activity or way of doing something collectively worked for them. The values they form as a result of this experience support their beliefs. They then develop and foster traditions in order to function and to survive. Such a definition is probably the most applicable description of culture within the military context.

[7] Ibid., p 29.

[8] E.H. Schein, *Organizational Culture and Leadership* (2nd ed; San Francisco: Jossey-Bass, 1992), p 12.

Culture Within an Organization

According to McShane, organizational culture serves three central functions. "First, it is a deeply embedded form of social control. Second, it is the 'social glue' that bonds people together and makes them feel part of the organizational experience. Third, corporate culture helps the employees make sense of the workplace."[9] These cultural functions can also be applied to the military. Although it is most evident within the regimental system of the army, they are applicable to any military group.

A culture within an organization functions in a manner similar to that of the culture in which it is situated, i.e. the military within the Canadian culture, and has similar terms of reference. In her discussion on culture within an organization, Pheysey notes that an organization's culture not only includes commonly held values, but also beliefs and attitudes. She goes on to state that it is these beliefs and attitudes that delineate "the way we do things here."[10] A prime example of an organizational culture is one in which all new managers are indoctrinated to believe that they must dress a certain way, drive a certain type of car and join certain clubs or groups, not only to belong to the organization, but also to be considered as worthy of promotion within the organizational structure. McShane defines organizational culture as "the basic pattern of shared assumptions, values, and beliefs governing the way employees within an organization

[9]Steven L. McShane, *Canadian Organizational Behaviour* (4th ed; Toronto: McGraw-Hill Ryerson Ltd, 2001), p 523.

[10] Diane C. Pheysey, *Organizational Cultures: Types and Transformations* (London: Routledge, 1993), p xiii.

think about and act on problems and opportunities."[11] Although an organization's cultural assumptions, values and beliefs can't be seen, or may not be as outwardly visible as those of a societal culture, they can be demonstrated through what McShane refers to as artifacts, "the observable symbols and signs of an organization's culture including its physical structures, [rituals and] ceremonies, language and stories."[12] In his paper on the influence of the regimental system, Kellett reinforced the importance that these artifacts play within the military context. It is these "symbols [that] play an important role in organizational life."[13] They are what define an organization and its culture while setting it apart from the rest of a culture or the parent society.

Using McShane's definition of organizational culture and applying it within the military context, the physical structures would be the infrastructure - the buildings and the actual layout of a unit, often known as the unit lines. More importantly, the nomenclature used for the physical structure is very much a part of the military culture. Within military organizations, physical structures are usually named for people, places or battles that have a connection to the unit occupying the structures. For example, in the Canadian Forces, suites in officers' quarters are often named after former commanding officers; streets on a base are often named after battles – Ypres, Amiens, etc; and ships are named after cities i.e. HMCS Halifax, HMCS Toronto, etc. The naming of physical structure within military culture is even carried further by the practice of naming the

[11] Steven L. McShane, *Canadian Organizational Behaviour* (4th ed; Toronto: McGraw-Hill Ryerson Ltd, 2001), p 506.

[12] Ibid., p 508.

[13] Anthony Kellett, "Motivation and Behaviour: The Influence of the Regimental System, Part 1 – Esprit de Corps," (DND, ORAE), ORAE Report No R109, (June 1991), p 2.

actual large pieces of equipment used in war fighting. As examples, for ground based equipment – the Abrams tank, the Leopard tank, the Cougar, the Lynx and for aircraft - F-18 Hornet, B-24 Liberator and C-130 Hercules. These pieces of equipment are named after a person, an animal, an idea or a place that denote strength, courage, speed or some other positive attribute required for war fighting.

Rituals and ceremonies, the second cultural artifact, are an integral part of the military and form a large part of what separates the military culture from the civilian milieu. "Rituals are the programmed routines of daily organizational life that dramatize the organization's culture."[14] Rituals are the 'how' of the organization and the military environment is rich with rituals. In the military, the daily coffee break in the officers' mess is a ritual observed by many units. Other activities such as the saluting of higher-ranking officers and early morning physical training could also be considered rituals of the military culture. There is no other part of our culture where either saluting or early morning physical training are so engrained so that these rituals are exclusive to military culture.

"Ceremonies are planned activities conducted specifically for the benefit of an audience."[15] More formal than rituals, ceremonies are an integral part of the military culture. Aside from the business aspect of the military, the Defence of Canada, there are

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[14] Steven L. McShane, *Canadian Organizational Behaviour* (4th ed; Toronto: McGraw-Hill Ryerson Ltd, 20

many ways in which the military differs from other government departments and the business sector. "Ceremonies serve a wide variety of purposes, including the following:

1. Maintain uniformity;
2. Initiate new members;
3. Provide a sense of social involvement;
4. Convey symbolic messages;
5. Provide connections and order;
6. Bridge between order and chaos; and
7. Provide hope"[16]

These differences are most visible in military ceremonies that serve all those purposes. Parades and the send-off of warships, conducted with much pomp and circumstance and in very proscriptive formats, are ceremonial activities that celebrate the military culture. These celebrations are recognized both internally and by the civilian sector. The formality whereby recognition for achievement is celebrated, either by an award or a promotion, is a structured format that is anticipated and well understood by the military audience. In a military culture, these ceremonies exemplify a form of celebration, both for the participants and spectators.

McShane's third artifact is one that thrives in the military culture - the organizational language. Members of the military culture generally address one another

[16] Gilbert W. Fairholm, *Leadership and the Culture of Trust*. (Westport CT: Praegar Publishers, 1994), p 84.

in a way more respectful and more formal, for the most part, than is done in the civilian sector. For example, in conversation, the terms 'sir' or 'ma'am' address officers of a more senior rank, while more junior members are addressed by their rank and name. Another facet of the organizational language is that "organizational leaders also use phrases, metaphors and other specialized vocabularies to symbolize the company's culture."[17] No argument could be presented to contradict the fact that the military has its own unique language. There are those outside the military that claim the many acronyms and the terminology used by the military to describe equipment or activities are a language in itself. Others would contend that within the military, the language varies depending on environment. Within each environment, the acronyms used are often unique to a specific workplace. The organizational language is a strong artifact of military culture.

Finally, the fourth artifact of an organizational culture is the organization's stories and legends. "…Military organizations certainly have specific organization cultures, in the same sense that business theory describes corporate cultures…"[18] Doctrine, a recognized set of principles, describes the military culture and is comparable as the more formal written equivalent to business theory. More importantly, the military also has informal and formal history. Within the military culture, there is no shortage of either stories or legends. In addition to the stories of various units in battle or involved in

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[17] N. Williams, "Office Design Creates 'A Great Place to Work,'" *Toronto Star*, September 9, 1999.

[18] Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies", (*Parameters*, Volume 30 Issue 3, Autumn 2000), p 30- 40.

domestic and peacekeeping operations documented as history in books, there are also the informal tales passed from unit to unit, member to member. These 'urban legends' are woven into the cultural makeup of the unit and provide a human dimension to the organization. They are also instrumental in celebrating the uniqueness of the military and keeping the military culture alive.

This paper has identified that within every organization there is an organizational culture and the military is no different. In addition to being a sub-culture of the larger group that, in this case, is Canadian society, the military culture also has its own values, beliefs and attitudes that make it a cultural entity. The military culture is rich with symbols and symbolism. It is these two factors that not only separate the military from the parent culture but also play an important role in maintaining cohesion.

Culture in a Military Context

"Culture is a strong force in directing human energy in specific and desired ways. As such, it affects our ideas of organizational effectiveness and overall success."[19] The culture that exists within the military environment has many influences that affect the values, norms and beliefs that define it. Schein noted that:

> Changes will produce stresses and strains inside the group, forcing new learning and adaptation. At the same time, new members coming into the group will bring new beliefs and assumptions that will influence currently held assumptions. To some degree…there is constant pressure on any given culture to evolve and grow.[20]

[19] Gilbert W. Fairholm, *Leadership and the Culture of Trust* (Westport CT: Praegar Publishers, 1994), p 147.

[20] E.H. Schein. *Organizational Culture and Leadership* (2nd ed; San Francisco: Jossey-Bass, 1992), p 116.

This is true within many Western military structures that have seen an unprecedented amount of change within the past ten years – reorganization, re-assigning of organizations, base closures, contracting out of primary activities. These changes have all impacted on the military and its culture. In his paper on "Organizational Culture and the Military," Lieutenant Colonel Breslin relates Schein's concept to military culture that Breslin defines as:

> the deep structure of military organizations, rooted in prevailing assumptions, norms, values, customs and traditions which collectively, over time, have created shared individual expectations among the members. A shared sense of meaning is established through a socialization process that brings together a variety of groups that converge in operations of the military. Military culture includes both attitudes and behavior about what is right, what is good and what is important, and is often manifested in shared heroes, stories and rituals that promote bonding among members.[21]

This is the glue that has held the military together although the changes mentioned have affected the culture of the military itself.

One way in which military culture has been and continues to experience profound change is in the provision of food and food services. From a cultural perspective, this can be related to food service where the traditional three separate dining facilities (one each for officers, senior non-commissioned members and junior non-commissioned members) at a unit have been combined into one facility for financial reasons and economy of effort. This amalgamation has been done to incorporate the 'best practices' taken from

[21] LTC Chas. B. Breslin, "Organizational Culture and the Military," (Carlisle: US Army War College, 2000), p 10.

the civilian business community, which in this case is institutional feeding, and for financial efficiency. In an era of corporate 'right-sizing' in the civilian sector, the executive dining room closed and all personnel were forced to use the same facility. The military tried to follow suit in spite of the fact that it was more culturally unacceptable than in corporate culture. There is a great deal of resistance to this change and it has still not been implemented at many units. The financial reason for this resistance is mainly because the publicly provided dining rooms in officers and senior non-commissioned members' messes support the non-publicly funded bar where more socialization takes place. In theory, socialization of personnel takes place in the dining room; in practice, this socialization takes place in the bar. This measure alone is seen as erosion of military culture, not as an improvement in increased operational efficiency.

Symbolism is one extremely important aspect of military culture that impacts on the culture in many positive ways. "The use of symbols is perhaps the most important way to influence people."[22] There is symbolism in the food provided for a Mess Dinner and the rituals surrounding the dinner itself. Mess Dinners are an important part of the military culture where the officers or the senior non-commissioned members of a unit dine and share the positive experience of 'breaking bread' within the confines of their peer group. The experience of eating together helps strengthen the group identity and promotes bonding. Within the Mess Dinner dining experience there are a certain number of courses of food and it is expected that the food will be prepared to the highest standard. There are also rituals that are observed, based on British tradition, during and

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[22] Sven Tito Achen, *Symbols Around Us* (New York: Van Nostrand Reinhold Company, 1978), p 8.

following the meal that have changed very little for hundreds of years. For example, the order of who is served first, the loyal toasts and other activities, such as the Naval Toast of the Day, that are peculiar to a unit or group, all play an important part in the ritual of the Mess dinner. Also, with any celebration there are minor rituals that are observed i.e. whether or not the port decanter is allowed to touch the table while being passed is dependant within which element the dinner is held. In some units, at mess dinners, a place is set, but left vacant, symbolizing those missing in action.

Anthony Kellett, who has studied aspects of the Canadian military culture in detail, in his analysis of the regimental system, a prime example of the military in a cultural context, looked at the influence of the regimental system on motivation and morale, with particular note on the influence of *esprit de corps*. Kellett's study looked at motivations both from an individual and from a group point of view. He identified the individual analysis being that of morale, while at the group level, cohesion, noting that they overlapped and that neither morale nor cohesion could be examined without considering the individual's social and cultural context.[23]

Kellett noted that the messes, the clubs that contain the dining rooms, have played an important role in socialization to the military, particularly for the officer corps. He stated that the messes were an important part of the military culture that promotes *esprit de corps* in addition to conformity, building of comradeship and development of a sense

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[23] Anthony Kellett, "Motivation and Behaviour: The Influence of the Regimental System, Part 1 – Esprit de Corps", (DND, ORAE), ORAE Report No R109, (June 1991), p 4.

of community.[24] He further stated that their consolidation from single regimental messes in the army to a central mess for each of the three rank groups, along with declining use, has contributed to a decline in the sense of belonging and *esprit de corps* within the regimental system. "An army's character or culture springs from many sources and is reflected in many ways," [25] he noted. However, these changes, initiated for the sake of fiscal responsibility and efficiency, may have served to 'unglue' the military culture and weaken the bonds.

[24] N.A. Kellett, "Regimental Messes and Institutes", Canada, Department of National Defence, Operational Research and Analysis Establishment, Directorate of Social and Economic Analysis, DSEA Staff Note18/85, (October 1985).

[25] Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies", (*Parameters,* Volume 30 Issue 3, Autumn 2000), p 30- 40.

Chapter 3 - The Importance Of Food Within A Culture

Cultural Orientation and Food Choice

Cultural patterns have an important role in food choice. Conversely, food has played a practical role in the survival and existence of culture. Sometimes the food choice is only as a result of a specific significance regarding the food chosen. For example, food is often defined as "good or bad, masculine or feminine, powerful or weak, alive or dead, healthy or non-healthy, a comfort or punishment, sophisticated or gauche, a sin or virtue, animal or vegetable, raw or cooked, self or other."[1] How food is defined is dependant on the cultural orientation. What may be considered acceptable food within one cultural context may not be within another. "But a culture which develops a practice permitting it to use otherwise inaccessible sources of food can transmit that practice not only to new members but to contemporaries or to surviving members of an earlier generation."[2] Since a culture is always changing, the addition and deletion of certain foods, cultural components within the culture, are no exception.

From an historical perspective, "in a very special sense, food is not only a nostalgic and persistent part of our cultural baggage, but also a symbol of what we are today."[3] For each person, there are foods that evoke memories, both positive and negative – spinach, liver, lobster, pasta, each of these words describing a food will bring

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[1] D. Lupton, *Food, the Body, and the Self* (London: Sage Publications, 1996), p 1-2.

[2] B.F. Skinner, *Beyond Freedom and Dignity* (New York: Alfred A. Knopf, 1971), p 131.

[3] Thelma Barer-Stein, Y*ou Eat What You Are.* (Toronto: McClelland and Stewart Ltd, 1979), p. ix.

a feeling to mind. In times of stress we tend to gravitate towards 'comfort food', which is familiar to us, rather than towards food from other cultures which may not be as familiar to us. Foods that are perceived as 'comfort food' in one culture may have no effect, or the opposite effect, in another culture.

"What is particularly striking about human beings, in nutritional terms, is the sheer diversity of the sources from which they can and do obtain the nutrients required to keep the body in existence and to fuel its daily activities."[4] However, what they choose to consider and to consume as food is based on their cultural values, beliefs and traditions. What some will eat, others will not. It is interesting to explore the reasons behind their decisions. "One population will cultivate simple agricultural products and have a high incidence of kwashiorkor [protein deficiency] while, close by, a population will meet its dietary problems by adequate diversification of agriculture, animal husbandry and fishing activities."[5] This willingness of some cultures to diversify can be further extrapolated into what a culture views as 'food' and can affect their evolution and ultimately survival as a culture.

Skinner noted that within a culture, even "the food allergy of a strong leader may give rise to a dietary law."[6] For example, a leader could eat a bad piece of meat,

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[4] Alan Beardsworth and Teresa Kiel, *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 50.

[5] Thomas R. A. Davis, "The Influence of Climate on Nutritional Requirements," *American of Journal of Public Health,* Vol 54, (December 1964), p 2051.

[6] B.F. Skinner, *Beyond Freedom and Dignity* (New York: Alfred A. Knopf, 1971), p 130.

become ill from doing so, and assume that he is 'allergic' to it. The leader then tells his followers about the experience and advises them not to eat the meat. Not only do they stop eating the meat but also they then devise rules that prevent members of the culture from eating the meat, thereby formalizing the aversion to the meat as a dietary law. It is difficult to conceive that even this seemingly minor effect of food on one individual within a culture could have such a far-reaching effect but, in many cases, the acceptability of a food may be based on something just as insignificant. However, it is these seemingly trivial incidents can be one source that marks what is defined as acceptable food by a culture.

Along with art and theatre, food plays an important role within various cultures. For example, aside from the art and rich traditional past of China, American-style Chinese food take–out immediately comes to mind when China is mentioned. The same could be said of Italy and pasta or pizza, and France with its rich gourmet cuisine. Although food plays an important role in defining a culture, that role is often down-played in examination of a culture in its entirety. " It is perhaps enough to illustrate that while some notable sociologists have said enough about food and eating in passing to suggest that here is a topic potentially of considerable sociological interest, it has in the past been far from a central focus of sociology."[7] For the most part, the study of food in culture has only been used to illustrate some other factor of the culture such as over-consumption, or cooking techniques as they relate to the home or in terms of food being

[7] S. Mennell, et al. *The Sociology of Food: Eating, Diet and Culture* (London: Sage Publications Ltd., 1992), p 4.

an integral part of cultural celebrations. Very little has been written on food itself as part of culture.

Theories on Food Comparative to Culture

Several theories have been advanced as to why the study of food, that provides us with sustenance and ultimately life, has been so downplayed as an aspect of cultural study. One theory is that there has been a "shift in the center of gravity of sociology itself."[8] This shift, described by Beardsworth and Keil, was from the study and analysis of food production and its relationships with society to the shared organization of consumption, including consumerism. Sociologists were more interested in the gathering, collecting and storing of food than in its actual consumption. It was almost as if, from a sociological perspective, consumption of food was an anti-climatic event. The ritual was in the collection of the food, not the food itself.

Another theory, which is a somewhat feminist one, for the exclusion of food in the study of culture has been advanced. This theory surmises that with the transition from a hunter to an agrarian society, the primary role of seeking out and preparing food became 'women's work' with women assuming the prime responsibility for provision of food to the family unit. Because this work was not valued as highly as that work done within the man's realm of responsibility, little attention was paid to food itself. However, in the past two decades this deficiency in the study of culture appears to have been addressed. An increased interest in the study of food in culture "has been closely

[8] Alan Beardsworth and Teresa Keil. *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 4.

associated with an enhanced recognition by sociologists of the significance of domestic work and the domestic sphere in general."[9]

The final theory for the increase in sociologists' interest in food can be seen as "a reflection of the increasing importance of a range of nutritional issues in the various arenas."[10] Food was not considered to be an important aspect of culture and its role within the culture was downplayed until a variety of social issues such as obesity and eating disorders became public health issues. Since obesity and eating disorders are now in the public health arena, more attention has been directed towards their origins and the impact of cultural change that may or may not have precipitated an increase in the prevalence of issues of both under and over-consumption. This cultural interest looks more at how much or how little is consumed, not what specific foods are consumed.

Once food was recognized as a more integral part of the culture rather than as an adjunct to the various celebrations and rituals that used food as a part of cultural expression, food began to be taken more seriously in the cultural context. According to Geertz, "it is not just to eat; it is to prefer certain foods cooked in certain ways and to follow a rigid table etiquette in consuming them."[11] Food became a component of culture that was worthy of study based on its own merits, not simply in relationship to another cultural component like a celebration. What is or is not acceptable as food in the cultural

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[9] Ibid., p 4.

[10] Ibid., p 5.

[11] Clifford Geertz, *The Interpretation of Culture: Selected Essays* (United States: Basic Books, a division of Harper Collins Publishers, 1973), p 53.

context is dependant on a variety of factors that include the time of day, location where it is being served (i.e. formal dining room versus picnic table), method of preparation and presentation and hence began the study of food in the sociological context.

Sociology of Nutrition

In the past thirty years, sociologists have begun to pay more attention to food as part of their studies of society. This has led to examination, from the sociological perspective, of a number of sub-cultural phenomena. These include the following:

1. Globalization of food or, as it has been called in some circles, "McDonaldisation"[12];
2. The increase in vegetarianism and the rationale behind this increase; and
3. 'Food ignorance' caused by the decrease in the knowledge base of food selection and preparation.

In the following sections, these phenomena will be reviewed within their relationship to culture.

McDonaldisation

"George Ritzer expands upon Max Weber's concept of rationalization by using the term McDonaldisation as a modern metaphor for the extension of bureaucratic

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[12] John Germov and Lauren Williams, eds. *A Sociology of Food and Nutrition: The Social Appetite* (Melbourne: Oxford University Press, 1999), p 5.

rationality throughout social life."[13] Although Weber was theorizing about rationalization in general terms, Ritzer took Weber's theory and applied it to food. This rationalization or mass production of food means the standardizing and homogenizing of food production and consumption. This rationalization has made the foodservices industry more efficient by scientifically reducing or eliminating waste of resources – time, labour and materials. As summarized by Germov and Williams,[14] Ritzer identifies four interrelated features of McDonaldisation or rationalization:

1. Calculability: the quantification of production processes such as the expected timing of the cooking of the various ingredients;

2. Efficiency: the best means to achieve a desired end (for example Drive through service);

3. Predictability: a production process that always operates the same way and produces the same good, irrespective of the worker or the geographic location of the food venue; and

4. Control: the increasing use of technology to minimize human judgment and error, where unskilled cooks follow detailed instructions and assembly line methods, and use machines to produce food.

[13] Ibid., p 6.

[14] Ibid., p 303.

McDonaldisation is more precisely defined as "the process by which the principles of the fast food restaurant are coming to dominate more and more sectors of American society as well as the rest of the world."[15] Except for Antarctica, there isn't anywhere in the world that you can go and not find the golden arches of McDonalds'™. Within each of these units, with minimal variation, you can expect the same décor, layout, menu, service and standard of food: a 'cookie cutter template'. This rationalization has provided a 'comfort zone' of familiarity for today's culture. Although there are those who despair of McDonaldisation, an analogy could be the 'assembly line' developed by Henry Ford that also had its detractors. Why shouldn't you produce "quality food" with the same ruthless efficiency as making mass produced cars? This food meets customer expectations because the customer knows that the same product, arguably good or bad, will be available regardless of the location of the food provider, time of day and any of the myriad of variables that affect food products.

The McDonalds'™ concept has been so successful world-wide that there have also been an increase in the number of clones - Pizza Hut™, Taco Bell™, Kentucky Fried Chicken™, to name a few, who have successfully emulated the McDonalds' formula of rationalization. There is another phenomenon, which applies to McDonalds' and its clones, and this is referred to "globalization [that] occurs when an organization extends its activities to other parts of the world, actively participates in other markets, and

[15] G. Ritzer, *The McDonaldization of Society* (Rev. ed; New York: Pine View Press, 1996), p. 1.

competes against organizations located in other countries."[16] Globalization sometimes causes organizations to become more cognizant of cultural differences in the new environments in which they find themselves and alter their business practices accordingly.[17] There may be some considerations for cultural differences such as the service of beer in McDonalds' in Germany and McLobster sandwiches on the Eastern seaboard of Canada and the United States in summer, but, for the most part, the menu is the same. The only time that there is a variation in the menu and food served is when there is product testing in a particular market to determine the feasibility of inclusion of a new item on the menu. More importantly, for the users of the services offered by these organizations, there is the increased reliance on familiarity of the products served. In terms of food, from the consumers' standpoint, this reliance allows a sense of familiarity with the food and identification with the McDonalds' concept. This increased level of comfort with something that is well known causes people to choose McDonalds' over local eating establishments when traveling. This does not allow a true experience of the culture of whatever area is visited nor does it permit the diner to expand their eating experiences. For the inhabitants of the countries where McDonalds' are located, "fast food is the one form of American culture that foreign consumers literally consume."[18]

A spin-off of the McDonaldisation phenomena, which is currently receiving well-deserved attention, is the large portion sizes that have now become the expectation within

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[16] Steven L. McShane, *Canadian Organizational Behaviour* (4th ed; Toronto: McGraw-Hill Ryerson Ltd, 2001), p 7.

[17] Ibid., p 7-8.

[18] Eric Schlosser,. *Fast Food Nation* (New York: Harper Collins, 2002), p 240.

our culture. The size of portions offered by these rationalized entities is causing an epidemic of obesity. Although McDonalds' has bowed to public pressure and changed the formulation of the fat used in its deep fryers to a more polyunsaturated type of fat, the calories from the fat have remained the same. However, the average portion sizeof the French fries served at McDonalds' has increased from 200 kilocalories in 1960 to 610 kilocalories today. This, and the increase in the size of sodas offered, has had a significant impact on the total food intake within our culture. Since so many meals are eaten outside the home, the trend has been to increase the portion sizes of foods eaten at home as well. This is indicative of the extensive impact that food rationalization or McDonaldisation has had on our culture. [19,20,21,22.]

Vegetarianism

Vegetarianism is becoming more prevalent within society and the military has not been excluded. From an informal analysis of requests for vegetarian foods and staff observations, it has been estimated that 15-20% of the cadets at the Royal Military

[19] Harvey Levenstein, "The Fat of the Land," *The Globe and Mail*, Saturday, February 22, 2003, D6. A review of the book, *Fat Land: How Americans Became the Fattest People in the World* by Greg Critser. New York: Houghton Mifflin, 2003.

[20] Rebecca Harris, "Fast Food, Fat Nation." *Foodservice and Hospitality*, Vol. 35, No. 11, (January 2003), p 39-46.

[21] John Heinzl, "Hold the Fries," *The Globe and Mail*, Saturday, February 22, 2003, F5.

[22] Shannon Brownlee, "Portion Distortion – You Don't Know the Half of It," www.washingtonpost.com 29 December 2002 p B01.

College of Canada are self-declared as vegetarians – vegetarians by choice.[23] "Social differentiation refers to the emergence of diverse food consumption patterns in developed societies."[24] One of the most prevalent social differentiations observed in North America, the United Kingdom and Australia in the past two decades regarding food consumption is the increase in the number of self-declared vegetarians. These are people who have conscientiously chosen to become vegetarian, not those who are vegetarian for religious reasons, and these self-declared vegetarians will be the sociological trend discussed here.

"Vegetarianism can be seen as both a way of defining the self and as a social movement, based on ethical considerations about animal rights and the environmental and health implications of producing and consuming animals."[25] Vegetarianism is part of a broader lifestyle that also espouses the same ways in fashion i.e. abhors the wearing of animal furs. More and more in our quest to live a healthier lifestyle, people are foregoing animal products in their diets and becoming vegetarian. " The most frequently cited reasons for conversion to vegetarianism was related to health followed by ethical concerns. Spiritual or 'metaphysical' concerns were ranked next, followed by ecological issues, ranked equally with gustatory or aesthetic preferences linked to a distaste for

[23] Major C.M. Schell, "Vegetarians - There's More to this Lifestyle Choice Than Lettuce and Tofu", *In Short Order – Land Forces Food Service Newsletter*, Volume 1 Issue 3, July 2000.

[24] John Germov and Lauren Williams, eds., *A Sociology of Food and Nutrition: The Social Appetite* (Melbourne: Oxford University Press, 1999), p 95.

[25] Ibid., p 96.

meat."[26] Some eat no animal products or by-products, some eat everything except red meat and some are instant vegetarians when they do not like an animal based food that is being offered in a particular situation and at a particular time. A vegetarian is defined as one who abstains from animal food especially that obtained by killing animals, and whose diet includes nuts, roots, green vegetables, cereals, seeds, fruit and nuts with or without eggs and dairy products.[27] The reasons for becoming a vegetarian differ from "a desire to conform with the expectations of those whom the individual concerned respects. Conversely, vegetarianism may be used as a means of demonstrating distance from individuals or groups towards whom there is a sense of antagonism or resentment."[28] For example, claiming to embrace vegetarianism is often employed as a form of controlled rebellion in adolescents.

What is most difficult to define is what individual vegetarians will find acceptable to include as part of their diet. It is this question that has cultural overtones. "Individuals who define themselves as 'vegetarian' may have widely differing eating patterns."[29] What they will actually choose to eat is often unclear and this unpredictability is difficult to rationalize. Even vegetarians will vary in their consideration of fish as an acceptable protein source. Some consider it acceptable while

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[26] Alan Beardsworth and Teresa Keil, *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 232.

[27] Major C.M. Schell, "Vegetarians - There's More to this Lifestyle Choice Than Lettuce and Tofu", *In Short Order – Land Forces Food Service Newsletter*, Volume 1 Issue 3, (July 2000), p 2.

[28] Alan Beardsworth and Teresa Keil, *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 230.

[29] Ibid., p 218.

others do not. There are even those who self-identify as vegetarians just because they do not like to eat red meat. However, "technically speaking, a vegetarian is a person who eats no flesh."[30] In a study of vegetarians in the United Kingdom, "the terms 'vegetarian' and 'vegan' [an ancient term that means more than eating] covered a varied set of dietary practices, including the ingestion of fish and sometimes chicken and other meats."[31] Within the cultural context, there is no clear-cut concept of vegetarianism.

For the medical professional, from a clinical point of view, there are two recognized types of vegetarians:

1. Vegan vegetarians. These are vegetarians who will not eat anything that is animal based. Of these vegetarians, the most restrictive are those who follow macrobiotic diets which contain only pure vegetable foods and are intended to prolong life; and

2. Lacto-ovo vegetarians. These are vegetarians who will consume both dairy (lacto) products and eggs (ovo). In this category, there are sub groups that may be either lacto or ovo, consuming either eggs or dairy products but not both.

[30] John Germov and Lauren Williams, eds., *A Sociology of Food and Nutrition: The Social Appetite* (Melbourne: Oxford University Press, 1999), p 101.

[31] Anna Willets, "'Bacon Sandwiches Got the Better of Me': Meat Eating and Vegetarianism in South-Eat London" in *Food, Health and Identity,* P. Caplan, editor. (London: Routledge, 1997), p 115.

There are also those who are vegetarians for religious reasons. Buddhism, for example, is one religion that espouses a vegetarian diet as part of the overall way of life. Some of the followers of this lifestyle will follow a very limited macrobiotic type of vegetarian diet that is restrictive both in quantity and variety of food permitted.

It is difficult to determine exactly what percentage of the population is vegetarian. Studies in the United Kingdom have determined that approximately 16 per cent of the population do not eat red meat and this number is rising.[32] In addition to those who do not eat meat for a variety of religious and societal reasons, the number of self-declared vegetarians in the United States is estimated to be between 3 to 7 per cent.[33] The data provided from the surveys conducted in the United Sates and in the United Kingdom support this estimation. Vegetarianism and its variations for eating have moved into the main stream of society.

Whatever the level of vegetarian, within the military context, they present a feeding challenge in both fresh feeding and for combat rations. It is essential not only to provide the vegetarian with appropriate vegetarian food that is suitable to their diet regime, but also to ensure that their nutritional needs are met so that there will be no degradation in their work performance. The Canadian Forces has addressed this issue by providing vegetarian choices in all messes and by making efforts to procure vegetarian combat rations to meet the requirements of this increasing group.

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[32] C. Spencer, *The Heretic's Feast*. (Hanover: The University Press of New England, 1995), p. 338.

[33] Alan Beardsworth and Teresa Keil, *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 225.

Food Ignorance

With an increase in food technology, "the time needed for food preparation at home has been drastically reduced with the availability of a variety of prefabricated foods in every supermarket"[34] and the increase in the use of microwaves to heat or cook food quickly. Some sociologists may possibly attribute this phenomenon to the lack of food preparation time and, hence, the increased use of prepared foods, or to the societal changes in the family unit. With a prevalence of dual income and single parent family units, fewer people seem to know how to prepare food. If they do know how to prepare food, they do not want to take what is viewed as a precious resource, their time, to prepare it. This is also a reflection of the time available for family dining versus the time consumed by leisure activities after working hours. We, like the United States, are becoming a nation where no one will know how to prepare meals using basic raw materials. Some of the societal factors that support this assertion are; the prevalence and use of prepared meals available at supermarkets; the availability of personal chefs who come into your home and prepare family meals; and the fact that one out of every three dollars for food is spent on meals prepared outside the home.

In her 1995 address to the Canadian Dietetic Association, then President of the American Dietetic Association, Barbara Davis, noted that the "average American

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[34] S. Mennell, et al. *The Sociology of Food: Eating, Diet and Culture* (London: Sage Publications Ltd., 1992), p 72-73.

housewife spends only twenty minutes per day in the kitchen preparing meals."[35] This lack of time spent on meals is indicative of the importance, or lack thereof, placed on the role of food and mealtimes in today's families. A study done by McCarthy and Strauss corroborates the lack of time spent in the home preparing meals by the amount of meal occasions that take place outside the home. They found that almost all (98%) of the 2500 households that responded had eaten out in the previous month. Typically, households ate out 9.42 times per week with adult males eating out 4.68 times a week on average.[36] While this means an increase in food consumed in a societal context, there is a decrease in food consumed as a family unit.

Food Within the Military Culture

Although the military is a sub-culture, it is formed from the members of the larger culture, society. Therefore, in addition to the negative connotation that military food brings, consideration of what is acceptable food, McDonaldisation, vegetarianism, and food ignorance all play an important role in how food is viewed within the context of a military culture. "Soldiers are fast food factories and self-perceived as immortal – a true product of American society."[37] However, it is their cultural orientation that reflects what is considered to be well-prepared, acceptable food. Soldiers have all been raised in our culture and, good or bad, reflect the values of the culture. "Eating habits are a reflection

[35] Barbara Davis, in her ADA President's Address to the Canadian Dietetic Association, Queen Elizabeth Hotel, Montreal, June 4, 1994.

[36] B. McCarthy and K. Straus, "Tastes of America 1992. Who in America Eats Out? Why Do They? And What Are They Eating?" *Restaurants and Institutions*, Vol 102, Pt 29, (December 1992), p 24-44.

[37] Celia F. Adolphi, "Commander's Perceptions and Their Attitudes About Their Responsibilities for Feeding Soldiers" in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations* Ed. by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 81.

of society and home and soldier eating habits will not improve until those of the general society improve."[38]

In war, "soldiers may 'live off the country', of course, by which is meant taking the food of the local civilian population, a familiar depredation that explains why, until the most recent times, the approach of even the best disciplined army often causes the inhabitants to hide every portable consumable."[39] Napoleon's armies even formalized the process through the use of foraging platoons. However, in Western armies, the days of rape and pillage are long over. It is now considered to be culturally unacceptable to take food from the local populace. In most cases, such as the current conflict in Iraq, it is the military that are the first providers of humanitarian aid, including food and water.

One of the six operational functions is force protection. Force protection is made up of two components. The first being activities which make the force difficult to find (concealment). "The second component of force protection includes actions to keep soldiers healthy and to maintain fighting morale."[40] Keeping soldiers healthy is often dependent on a variety of factors, one of which is their nutritional status. At one time it was believed that "When a body of men join together to perform a day's task, they will

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[38] Celia F. Adolphi "Commander's Perceptions and Their Attitudes About Their Responsibilities for Feeding Soldiers" in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations.* Ed. by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 81.

[39] John Keegan, *A History of Warfare* (Toronto: Key Porter Books Ltd, 1993), p. 302.

[40] Department of National Defence. B-GJ-005-500/FP-000 (Ed 2, Ratification Draft) *CF Operations Planning Process*. (Ottawa: DND, 2002), p 2-11.

need at the very least to eat once between sunrise and sunset."[41] Little attention was given to what an army was fed and even less consideration to its acceptability. One meal a day was acceptable and neither its content nor how well, or poorly, it was prepared was given much, if any, attention. However, science has proven that more than that is required to maintain an operationally fit force. One way in which good nutritional status is maintained is by providing well prepared, appropriate food and ensuring that the soldiers have an opportunity to consume it.

[41] John Keegan, *A History of Warfare* (Toronto: Key Porter Books Ltd, 1993), p. 301.

Chapter 4 - The Effect Of Food On Operational Effectiveness

> Anyone who tries to maintain that wretched food makes no difference to an army, and cites Fredrick the Great's accomplishments with ill-fed soldiers, is not taking a dispassionate view of the subject. Ability to endure privations is one of the soldiers' finest qualities: without it an army cannot be filled with genuine military spirit. But privation must be temporary; it must be imposed by circumstances and not be an inefficient system or a niggardly abstract calculation of the smallest ration that will keep a man alive. In the latter case it is bound to sap the physical and moral strength of every man.
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> - Clausewitz[1]

In this section, food and its role in operations at various times in history will be examined in the context of culture and operational effectiveness. The intent is not to provide an historical review, but to provide some examples where documentation exists on how food impacted on operational effectiveness. However, the examination of food and its effect on operational effectiveness is somewhat hampered by a lack of records written regarding food in conflicts pre World War II. Prior to World War II, information is cursory at best and can often be found in the written accounts kept by soldiers. The soldiers who kept these diaries didn't have the time to write about the mundane aspects of life in the trenches and seemed to have focused more on the actual acts of war rather than on living conditions, as intolerable as they may have been. It is human nature not to mention food when it meets expectations; therefore, most of the documentation presents food from a negative perspective.

[1] Carl von Clausewitz, *On War* Ed. and Trans. by Michael Howard and Peter Paret, (Princeton: Princeton University Press, 1976), p 331.

Paret makes reference to soldiers in Machiavellian times, relating the behavior of the French troops sent by the king to assist in the recovery Pisa by the Florentines. The troops "refused to advance against the city, complained about their pay and food, mutinied and disappeared."[2] This is a prime example of the worst effect of food, of lack thereof, on operational effectiveness. At that time, "…in most armies, the aristocratic officers traveled in style, and the troops fighting without political passion, would lose morale if the food supply became uncertain or if operations became distastefully strenuous."[3] In order to ensure that the soldiers who were fighting without cause or loyalty continued to do so, in addition to being promptly paid, guarantee of a source of adequate food was essential.

The British experience in India during the 1800s is a stellar example that it is not only the food itself that has to be considered in a cultural context but also in the way in which food is prepared that can impact on operational effectiveness. The British officers serving in India, who did not understand the many intricacies of the caste system, witnessed this first hand. By not adapting to the cultural requirements of their soldiers, products of the caste system, they encountered resistance which was preventable had they paid more attention to this social requirement of their soldiers. "In 1824, a sepoy regiment ordered to Burma refused to move because it was felt that its caste was endangered by the official refusal to supply them with special transport to carry their

[2] Peter Paret, ed, *Makers of Modern Strategy: from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986), p18.

[3] Ibid., p 94.

cooking pots, while caste usage compelled each man to have his own set."[4] Had the British been more sensitive to this culturally motivated cooking requirement and adapted to it, this incident would not have happened.

Again in India in 1857, "native troops - the sepoys - of the East India's Company army mutinied against what they believed were British attempts to undermine their culture. The mutiny developed into a three year war during which the British Army conducted a series of punitive campaigns."[5] The Great Indian Mutiny began when "…the army received new Enfield rifles from England. These required the soldiers to bite off the ends of the cartridges specially lubricated to fit the tighter rifle bores. Rumors quickly spread that the lubricants were made of beef and pig fat, anathema to Hindus and Muslims respectively."[6] The sepoys felt that the British gave their culture no value and they intended to change the sepoy culture into one more closely resembling their own, including the food. Hence, the revolt by the sepoys to retain what they felt was rightfully theirs - their lifestyle - began.

The following is a description of French Army soldiers serving in Algeria in the 1840s and the demoralizing conditions to which they were continually subjected.

> Demoralized soldiers are seldom offensive minded, and the morale of Bugeaud's command in 1840 stood at rock bottom. French uniforms and equipment were unsuited to the African climate. Confined to disease

[4] Michael Edwardes, *Battles of the Indian Mutiny* (London: B.T. Batsford Ltd, 1963), p. 18.

[5] Bruce Allen Watson, *When Soldiers Quit: Studies in Military Disintegration* (London: Praegar, 1997), p 27.

[6] Ibid., p 27.

> ridden garrisons, continually harassed by Arab raiders, most soldiers preferred a diet of dogs, cats, and roots to the stale bread, poor-quality rice, and salted bacon provided. A diet [of dogs, cats and whatever they found to eat] that often produced violent diarrhea and could lead to death from dehydration.[7]

No matter how good the physical status and how high the morale of the troops, if they suffer from food poisoning or became ill from the food, they are rendered ineffective and, as such, are no longer operationally effective.

During the American Revolution, "while a remarkable number of Confederate soldiers refused to be deterred by extreme hardship, the morale of others was affected. One private wrote home in 1862 that if he ever lost his idealism, it would be attributable to the failures of the commissariat: "Corn meal mixed with water and tough beef three times a day will knock the "Brave Volunteer" under quicker than the Yankee bullets"[8] In 1864, General Lee wrote to the Secretary of War that short rations were having a bad effect on his men, both morally and physically, and that desertions were increasing as a result.[9] The soldiers' expectation, at the minimum, was that they would be fed proper meals in return for their services. Confederate soldiers did not have the variety in their diet that the Union soldiers did. The soldiers in the Union army were issued with hardtack, a simple flour biscuit. It was this hard bread that they remembered and joked about.[10]

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[7] Peter Paret, ed, *Makers of Modern Strategy: from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986), p 379.

[8] Anthony Kellett, "Combat Motivation," Canada, Department of National Defence, Operational Research and Analysis Establishment, ORAE Report R77, (November 1980), p 239.

[9] Ibid., p 239.

[10] Civil War Food - http://www.nps.gov/gett/gettkidz/hardtack.html

Napoleon, aside from being recognized for his famous phrase about 'an army marching on its stomach', recognized the importance of mobility in warfare. He also foresaw the requirement to provide food appropriate to a mobile army. Napoleon, "crossed the Alps with no food but biscuit, a compact durable portable nutriment that needs no cooking; and he arrived in Italy with a hungry army planning to live on the country."[11] Although this food was not the type that would normally be considered to be culturally acceptable, it was considered adequate enough for consumption and enabled the soldiers to move forward across the Alps and satisfied the requirement of operational necessity.

Paret quoted Colonel Wilhelm Balck, who in his book on tactics, warned "the steadily improving standards of living tend to increase the instinct of self-preservation and to diminish the spirit of self-sacrifice …we should send our soldiers into battle with a reserve of moral courage great enough to prevent the premature moral and mental depreciation of the individual."[12] What is deemed to be an acceptable standard of living is determined by our culture. This is the level of existence that has been determined to be sociologically acceptable. Now, in Western armies who enjoy a high standard of living while in garrison, it is taken for granted that well prepared food, appropriate to the

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[11] Peter Paret, ed, *Makers of Modern Strategy: from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986), p 115.

[12] Ibid., p 519.

situation will be provided. If this food is not provided then it creates dissatisfaction and low morale.

The First World War

In his memoirs of World War I, General Ludendorff, of the German Army, acknowledges the importance of rations and their effect on operational effectiveness. "The work of the Army in the field depended to a high degree on their rations. That, next to leave has the most decisive effect on the MORAL [morale] of the troops. I thus had to give the food question my serious attention…" General Ludendorff acknowledged that because of the Allied blockade of Germany and the consequent food shortages, the German Army morale suffered and they lost their will to fight.[13] Of note, one of the contributing factors to this food shortage was a Canadian artillery barrage that severed the German lines of communication. "The success of the preliminary bombardment can be judged by the fact that some German units did not get rations, ammunitions or rest for 3 or 4 days. So that, by 9 April, when the attack was launched, [the battle of Vimy Ridge] the troops were miserable. The Germans called it the "week of suffering."[14]

Understandably, mutinies have an adverse effect on operational effectiveness in the extreme and in the First World War, it was no different for the French Army. "The French Mutinies of 1917, for example, rested on a base of discontent which included

[13] Gen E. Ludendorff, *My War Memories: 1914-18.* (London: Hutchison and Co, no date), Vol 1, p. 349-61 as quoted in Anthony Kellett's, "Combat Motivation," Canada, Department of National Defence, Operational Research and Analysis Establishment, ORAE Report R77, November 1980, p 239.

[14] Canadian Forces College, *Battle of Vimy Ridge (*CSC Script, Toronto, June 1994), p 31.

anger at the military organization's failure to meet the soldier's needs. Rest and leave were inadequately provided, rations poor, monotonous, and carelessly prepared…"[15] In a letter to a relative, where one soldier states his grievances, the food was described as "shameful."[16] In this case, solving the mutiny required resolution of other operational issues as well. General Petain, newly assigned commander of the French forces, recognized the sources of discontentment and in addition to addressing the operational ones ensured that, among other amenities, the troops were given better and more appropriate food.[17,18] However, the soldiers continued to suffer what they deemed to be unnecessary deprivation. "Dissatisfaction proved especially acute in the Chemin des Dames sector, it would appear because of the difficulty of getting hot food to soldiers in such an active sector. A soldier from 274e RI commented in July 1917: "for forty five days, we haven't had any hot food. Always cold, and served in oil and vinegar." [19] The conditions for these soldiers improved somewhat when their unit moved closer to the kitchens and the food arrived hot. In September 1917, another soldier commented that visits of the hot food wagon had become more frequent, noted that conditions were getting better and indicating an improvement in food distribution.[20] For the French, what

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[15] J.G. Fuller, *Troop Morale and Popular Culture in the British and Dominion Armies 1914-1918* (Oxford: Clarendon Press, 1990), p 26.

[16] Leonard V. Smith, *Between Mutiny and Obedience: The Case of the French Fifth Infantry Division During World War I* (Princeton: Princeton University Press, 1994), p 188.

[17] J.G. Fuller, *Troop Morale and Popular Culture in the British and Dominion Armies 1914-1918* (Oxford: Clarendon Press, 1990), p 27.

[18] Bruce Allen Watson, *When Soldiers Quit: Studies in Military Disintegration* (London: Praegar, 1997), p 59-62

[19] Leonard V. Smith, *Between Mutiny and Obedience: The Case of the French Fifth Infantry Division During World War I.* (Princeton: Princeton University Press, 1994), p 226.

[20] Ibid., p 226- 229.

might have seemed to some as a minor issue – food - was very important and affected their operational effectiveness in that they would not make an effort to fight since they were preoccupied with the standard of their food.

The other Allied soldiers fared no better than the French.

> A similar scale of rations prevailed in the British and French armies, yielding a virtually identical caloric value, but in both armies complaint was frequent because of problems of supply, particularly to the front line that made all ration scales largely notional. In practice British troops subsisted largely on bully beef and bread or biscuits. The monotony and inadequacy of this diet was a frequent target of wit in the front line journals throughout the war.[21]

The poor quality and lack of enough food often led to front line soldiers making accusations of pilferage and black market activities by the troops involved with the movement of the food. This affected morale since the troops knew that they were not getting their full entitlement. The issue of food was of such concern that it was raised in the British War Cabinet in 1917 as one of the major causes of troop discontent.[22] If soldiers are concerned about the origin of their next meal, they are unable to focus properly on the task at hand and this will have an adverse effect on operational effectiveness.

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[21] J.G. Fuller, *Troop Morale and Popular Culture in the British and Dominion Armies 1914-1918* (Oxford: Clarendon Press, 1990), p 59.

[22] Ibid., p 60-61.

In his novel, *Birdsong*, where he deals extensively with life in the trenches and tunnels during the First World War, Sebastian Faulks talks about the food and the emotions, both positive and negative, that it raised in the men living in the austere environment of the trenches. For some of the men, the food, bad as it was, was better or equal to what they would have received at home in lower working class England, so they found it acceptable based on their cultural orientation. For others, the poor food gave cause for discontent and became a constant reason for complaint. The officer in charge recognized that in addition to some sleep, hot food "in their bellies" was essential to get them to continue working. He tried to ensure that food was available and this happened. This same officer felt guilty, when, while on rest and relaxation (R&R), he was given an adequate meal and some wine whilst his men remained *in situ* with the same "bully beef and bread".[23]

During World War I, Canadian troops' provisions were no better. " A coarse, unvarying diet of corned beef, biscuits and tea plus cheap jam, left the soldiers perpetually hungry."[24] However, following their time at the Front, soldiers could look forward to going into reserve where the soldier "could rely upon two hot meals a day…"[25] Food was not considered from a morale perspective, if at all. Little or no attention was paid to food in terms of operational effectiveness. There was no

[23] Sebastian Faulks, *Birdsong*. (London: Vintage, 1994), p 127, 141-142, 212.

[24] Canadian Forces College, *Battle of Vimy Ridge (C*SC Script, Toronto, June 1994), p 10.

[25] Brereton Greenhous and Stephen J. Harris. *Canada and the Battle of Vimy Ridge 9-12 April 1917* (Ottawa: Canada Communications Group, 1992), p 49.

recognition in World War I that, "if soldiers do not consume adequate rations, mental and physical performance and morale may suffer."[26]

The Second World War

During the Second World War, the disintegration of the German *Wehrmacht* can also be attributed to the fact that as the German system disintegrated; the soldier serving on the front lines felt that his own survival as well as that of the group was doubtful. "That doubt was enhanced by the belief that the group was isolated – that no one cared about them anymore – and by anxieties concerning the army's inability to provide adequate food, clothing …"[27]

It was only with the Second World War that more attention was given to food in terms of morale and *esprit de corps*, and its effect on operational effectiveness in the British Army. Although, Brigadier Bernard Fergusson, who commanded a Chindit column in the Second World War noted that a "lack of food…the biggest single assault on morale…is rarely noticed in the many books that have been written, and the many speeches delivered upon that subject. Lord Moran, whose lectures on the subject of courage over many years lately culminated in a book, makes no mention of it."[28] Brigadier Fergusson observed that there was not much attention paid to morale, in

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[26] Carol J. Baker-Fulco, "Overview of Dietary Intakes During Military Exercises", in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations*, ed by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p121.

[27] Bruce Allen Watson, *When Soldiers Quit: Studies in Military Disintegration* (London: Praegar, 1997), p 159.

[28] Bernard Fergusson, *The Wild Green Earth* (London and Glasgow: Collins Books, 1946), p 194.

general, at the time. Furthermore, Brigadier Fergusson believed that when the rations were minimal, the soldier had nothing to which to look forward and became prey to his fears that his increasing weakness would eventually overwhelm him.[29] Major General Richardson, a British medical officer, wrote on the fighting spirit and has a chapter in his book on what he calls 'props'; the tools required to face combat. In this book he states, "I feel sure that no soldier worthy of the name has overlooked the need for good meals, hot and well-cooked whenever possible."[30] This point recognizes that food is required to ensure that morale is kept high and operational effectiveness is maintained.

In describing the effects of food on the Canadian artillerymen in World War II, Blackburn notes that " for the men on the guns who can't see the effect of the fall of their shot, it's a matter of vast irritation that every noon, just as the cooks dole out their hot meal, your order comes down to take post."[31] He further indicates that the food grows cold and the tea grows a scum making both less than appetizing. Blackburn relates another incident where the collective morale of the group was low following the death of a comrade. To take their minds off the war, and unable to remove them from the lines for a bath and a clean bed, an impromptu Thanksgiving dinner was created with a captured

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[29] Bernard Fergusson, *The Wild Green Earth* (London and Glasgow: Collins Fontana Books, 1956), p 171-72 as quoted in. Anthony Kellett, "Combat Motivation", Canada, Department of National Defence, Operational Research and Analysis Establishment, ORAE Report R77, (November 1980), p 239.

[30] Major-General F.M Richardson, *Fighting Spirit: A Study of the Psychological Factors of War* (London: Leo Cooper Ltd, 1978), p 41.

[31] George Blackburn, *The Guns of Victory: A Soldier's Eye View, Belgium, Holland and Germany 1944-45* (Toronto: McClelland and Stewart, Inc, 1996), p 30.

chicken and some vegetables from an abandoned garden.[32] Blackburn's recollections contain many similar anecdotes about the importance of food on morale. The occasions when food was used for a celebration or to mark a significant event had a positive effect on the soldiers' morale. At times when the food was less than adequate, it had an adverse effect.

Admiral Chester Nimitz, an American naval officer, is one commander who is noted for his attention to the effect of morale (and food) on operational effectiveness. In one of his biographies, there is Second World War story related about the Admiral who, while returning to his quarters one evening, had his driver pick up a rather drunken sailor who was hitchhiking. The sailor, a Seabee, complained about the terrible life in his camp, including the poor food. The next morning, Nimitz paid a surprise visit to the camp, confirmed the Seabee's allegations, and ensured that the commanding officer was properly disciplined.[33]

United Nations and Other Alliance Operations

The United Nations (UN), recognizing that there are many cultural differences that impact on food intake, has devised a ration scale that takes culture into consideration. The ration scale is divided into two portions, one for Eastern tastes and one for Western ones. The Eastern scale includes live animals that some groups require for cultural

[32] Ibid., p 107-108.

[33] E.B. Potter, *Nimitz* (Annapolis: Naval Institute Press, 1976), p 226-227.

reasons associated either with religion or food safety. The Western portion of the scale provides a North American style of issue that permits preparation of food that Westerners are accustomed to consuming. This recognition of the various cultures of the personnel who serve on UN missions ensures that feeding requirements of the troop contributing nations are met. This in turn meets their requirements and increases their operational effectiveness. [34]

No more than in coalitions is culture and food more of a consideration and a source of concern regarding operational effectiveness. "Coalitions may be formed from nations with different cultures, language, moral and ethical values, and incompatible social and economic outlooks. Sources of national pride and cultural sensitivities will vary widely, yet the combined force commander must accommodate them."[35] Major General (retired) Walter Holmes substantiated the importance of these cultural differences and the impact on food services. From 1999 to 2002, as the Force Commander of the Allied Command Europe Mobile Force Land (AMF (L)), he was responsible for a force of 22,000 representing 17 nations. Although no troops from the force mutinied over the food, Major General Holmes had to be very conscious of the expectations, based on their cultural orientation, of troops from each member nation. Fresh food was always preferred over combat rations and allowances had to be made for forces that included alcohol with meals, including breakfast. Alcohol at breakfast is not

[34] DLBM/Food Services, *Lecture to the United Nations Logistics Course 0202*, Canadian Forces School of Administration and Logistics, November 2001.

[35] Canada, Department of National Defence. B-GL-300-001/FP-000 *Land Force Volume 1 – Conduct of Land Operations – Operational Level Doctrine for the Canadian Army*. (Ottawa: DND Canada, DDAT, 1998), p 104.

culturally acceptable to North Americans but Italian forces include wine at breakfast, as wine consumption is an integral part of their culture. Belgian forces, who were accustomed to dining well, had to make cultural adjustments when required to accept food from a force that had what they deemed to be a lesser and, therefore, almost unacceptable, standard. The varying standards of food, as benchmarked by their acceptability to the various cultures represented by the 17 nations, had to be recognized and accommodated within the force structure.[36]

> Catering to all the peculiar preferences, in food, in clothing, in religious observances - gave our service and supply forces a thousand petty headaches. The Dutch wanted milk where the French wanted wine. The Moslems wanted no pork and the Hindus, no beef. The Orientals wanted more rice and the Europeans wanted more bread. [37]

And this is where we find ourselves today. To provide our soldiers with well prepared, appropriate food by North American definition is not enough to have a positive effect on operational effectiveness; we must ensure that it also meets the cultural requirements of a multinational force. The next section will present a model for well-prepared, appropriate food and its effect on operational effectiveness focusing on morale and *esprit de corps*.

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[36] Major General Walter Holmes, Interview, Kingston, ON, 9 Apr 2003.

[37] Matthew B. Ridgway, *The Korean War* (New York: Doubleday and Company Inc, 1967), p 221.

Chapter 5 – Presentation of a Model for Food and Its Effect on Operations

In previous sections of this paper, we have examined the components that constitute a culture, the role of food in culture, some of the current sociological phenomena involving food and how these factors might apply within the military culture and some historical perspectives on food and operational effectiveness. The important role of food consumption will be shown in the following models that apply to a variety of factors involving food in the operational setting. Ultimately, this exemplifies the effect of food on operational effectiveness. Several factors were examined for relevance to food, food consumption and the effect of well prepared, appropriate food on operational effectiveness in the development of this model. These factors are morale, *esprit de corps,* (which is an integral part of cohesion), leadership, and training.

Is it possible to precisely quantify what meets the criteria of well-prepared, appropriate food? Basically, appropriate food can be defined as that food which is acceptable within the context of culture. Therefore, well-prepared, appropriate food can be defined as food that is prepared and served in accordance with the expectation of the cultural group for which it is intended – in this case, the military. Some of the factors that may be considered in provision of well prepared, appropriate food, are use of standardized specifications, preparation using standardized recipes, service under optimum conditions considering time, correct temperature of food, locale, group, operational requirement, etc. This ensures that the expectations of soldiers for food of a certain standard are met.

In discussion of food, it always has to be foremost in thought that "what is particularly striking about human beings, in nutritional terms, is the sheer diversity of the sources from which they can, and do, obtain nutrients required to keep the body in existence and to fuel its day-to-day activities."[1] However, as we have seen, what is acceptable as food is highly dependent on the cultural reference of the individual or group. Why do people eat certain foods and not others? "…All cultures are highly selective in what they actually define as food, that is, items acceptable for human consumption."[2] What makes one food appropriate and another food inappropriate is the validity it is afforded within the culture. Further to this, individual considerations should be given to the "appropriateness of a particular food [that] can vary according to meal occasions, attitudes about the food, and the physical and social environment."[3] Thereby making the definition of well-prepared, appropriate food in the cultural sense even more complex.

> Nutritionists know that the palate is trained, that taste and smell are subject to cultural control. Yet for lack of other hypotheses, the notion persists that what makes an item of food acceptable is some quality inherent in the thing itself. Present research into palatability tends to concentrate on individual reactions to individual items. It seeks to screen

[1] Alan Beardsworth and Teresa Keil, *Sociology on the Menu: An Invitation to the Study of Food And Society* (London: Routledge, 1997), p 50.

[2] Ibid., p 51.

[3] Bernadette M. Marriott, ed., *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations* (Washington: National Academy Press, 1995), p 25.

> out cultural effects as so much interference. Whereas…the cultural controls on perception are precisely what needs to be analyzed.[4]

Again, it is the cultural references of a certain food that will determine its acceptability. As has been previously noted, there are a variety of cultural factors that impact on food acceptability.

There are those who would argue that making a food acceptable is as simple as training soldiers to eat all the food that they are given in the operational setting to ensure optimum nutrition. As one United Kingdom Army Personnel Research Establishment Report noted, "better training in the concept of 'Combat Nutrition' will permit soldiers to discard with equanimity their home-based gastronomic pleasures and accept readily the more austere discipline of feeding in the field as an integral part of human operational refueling."[5] To state this in theory is fine. However, in practice, cognizance of the human factors involved in food preference, including cultural references, and subsequent intake must be considered.

"One of the best ways of predicting whether people will eat a food, or how much of it they will eat, is to ask them how well they like it."[6] To validate food acceptance,

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[4] Mary Douglas, "Culture," in *Annual Report of the Russell Sage Foundation, 1977-78.* (New York: Russell Sage Foundation, 1978), p 59.

[5] LtCol J.P. Crowdy, M.F. Haisman, and Captain McGavock, "Combat Nutrition: the Effects of A Restricted Diet on the Performance of Hard and Prolonged Physical Work", (United Kingdom, Ministry of Defence, Army Personnel Research Establishment, Report 2/71, April 1971), p 34.

[6] J. Eindhoven and D,R, Peryam, "Measurement of Preferences for Food Combinations," *Food Technology*, Vol 13 Number 7, (July 1959), p 379-382.

hedonic scales, which measure the pleasure derived from foods based on certain organoleptic factors (i.e. appearance, taste, texture, smell) are used. As food is sampled, each of the factors is rated on its acceptability. If a food is not acceptable, it will not be chosen for consumption. This is the concept of food preference. There are differences between a food preference, food choice and food habits which have been identified and are clarified as follows:

1. Food preference – the particular food an individual likes or dislikes;
2. Food choice – the foods selected by an individual at a given time; and
3. Food habits – the sum of food choice of an individual constituting his/her total diet.[7]

Although food preference has been recognized, it is not generally well understood. "The concept of food preference is not generally appreciated in the British Army."[8] In the British Army, as well as most other armies, more credence has been given to food as item of supply rather than a commodity that soldiers depend on for their well-being. Often, little or no thought is given to planning what the soldiers would really like to eat and ensuring that it is provided. "…The hypothesis being that – under arduous conditions – the fighting man must be trained to accept rations as a necessary re-fuelling procedure, frequently deficit in energy content and not necessarily ranking high on the

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[7] J. Yudkin, and J.C. McKenzie, eds., *Changing Food Habits*. (London: MacGibbon and Kee, 1964), p 135.

[8] Major J.S. A. Edwards, "Food Preference – A Preliminary Analysis of Composite Rations Used on the Falklands Islands During Operation Corporate," presented to members of NATO Panel VIII, RSG 8, Zeist, the Netherlands, 17-21 October 1983, p 3.

epicurean scale."[9] However, attention to food preference is important to ensure that the food provided is consumed. Food preference is a result of cultural orientation.

"Research suggests that, if possible, consideration should be given to the appropriateness of the items contained in the ration to situational variables including the time of day, temperature, and social environment. Providing appropriate foods might result in an increased intake of rations."[10] Appropriate food, from a cultural perspective, will be the food of choice. As it is deemed culturally acceptable, food will be chosen based on its appropriateness not only to the food itself but also in the context of the situational variables i.e. time, temperature and way in which it is served.

Therefore, appropriate food can be defined as food being recognized by its culture as that closest on the spectrum of food acceptability to meals prepared at home using basic, raw ingredients: the 'home cooked meal', or its equivalent. As mentioned in the introduction, one study of food obtained from a variety of sources noted that the home cooked meal rated the highest. Those food items from a family style restaurant, diner/fast food restaurant and school cafeteria were rated significantly higher that those from the remaining three food services operations - military, hospital and airline food services. The findings were that the expected acceptability of military food was rated low and it

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[9] Col J.P. Crowdy, "Experimental Low Calorie Feeding in the British Army," United Kingdom, Ministry of Defence, Army Personnel Research Establishment, Report FSG/73/T8, no date, p 1.

[10] Bernadette M. Marriott, ed., *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations.* (Washington: National Academy Press, 1995), p 25.

was in the same range as airline and hospital food.[11] Of note, this study was done without any of the participants even tasting the food offered by any of the food service settings mentioned in the study. This does not bode well for military food services and of the importance that food should be afforded in the operational setting.

The human factor is the most difficult to quantify and also the most difficult to control. This is more difficult in the operational setting where the level of stress under which people function is extremely high. How can operational effectiveness be evaluated, if indeed there is a means by which to measure it? Is it in the ability of the unit to adhere to and meet the operational plan that they are charged to execute? How do we define operational effectiveness? " Organizational effectiveness, in essence, is a judgment we and others make about what we do and are responsible for doing. Effectiveness is a measure of the accomplishment of goals."[12] The same can be said for operational effectiveness. However, unlike organizational effectiveness, it is often difficult to quantify operational effectiveness. "Combat [operational] effectiveness requires sustained vigilance, precise reasoning, and prompt decision making under stress. Subtle differences in these intellectual behaviors can degrade military performance dramatically resulting in significant morbidity and mortality."[13] Operational

[11] A.V. Cardello and R. Bell, US Army Natick Research Development and Engineering Center, Natick, Mass, unpublished manuscript results as cited in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations*, ed by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 178-179.

[12] Gilbert W. Fairholm, *Leadership and the Culture of Trust* (Westport CT: Praegar Publishers, 1994), p 148.

[13] Mary Z. Mays, "Application of Cognitive Performance Assessment Technology to Military Nutrition Research" in *Emerging Technologies for Nutrition Research*, ed by S. Carlson-Newbury and Rebecca Costello, (Washington: National Academy Press, 1997), p 521.

effectiveness can then be related to how well an operation is conducted in terms of meeting its operational objectives or goals while minimizing personnel losses, "…the development of high morale in both combat and service forces is essential to this improved efficiency."[14]

Food and Morale

"Feeding was the biggest morale factor that could be controlled."[15] How can food affect morale? By providing food that is considered to be culturally acceptable, morale is affected. It is expected that a good leader will pay attention to the myriad of factors that affect the health and well being of the troops under his command, including his own requirements. One of these factors that affect troop health and welfare is morale. How does one define morale? Kellett uses the following definition:

> a confident, resolute, willing, often self-sacrificing and courageous attitude of an individual to the functions or tasks demanded or expected of him by a group of which he is a part that is based on such factors as pride in the achievements and aims of the group, faith in its leadership and ultimate success, a sense of fruitful participation in its work, and a devotion and loyalty to the other members of the group.[16]

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[14] Henry Eccles, *Logistics in the National Defense* (Harrisburg, PA: The Telegraph Press, 1959), p 142.

[15] Celia F. Adolphi, "Commander's Perceptions and Their Attitudes About Their Responsibilities for Feeding Soldiers" in *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations* Ed. by Bernadette M. Marriott, (Washington: National Academy Press, 1995), p 81.

[16] Anthony Kellett, *Combat Motivation: The Behaviour of Soldiers in Battle* (Boston: Kluwer - Nijhoff Publishing, 1982), p 7.

In war, the moral is to the material as three to one.

\- *Napoleon*[17]

> On the moral plane conflict is a struggle between opposing wills. The term *moral* [presented in this context, use of the word 'moral' is more realistically defined in today's terminology as morale] used here is not restricted to ethics but pertains to those forces of psychological rather than physical nature including the mental aspects of conflict. These are difficult to grasp and impossible to quantify. They are manifest in such intangibles…and the determination of the individual combatants to achieve victory.[18]

Therefore, it is difficult to quantify, except in the most general terms, the effects of these 'intangibles' on the outcome of an operation. However, it is these "moral forces [that] exert a more significant influence on the nature and outcome of conflict than do physical."[19] High morale can have a positive effect on the outcome of an operation, especially when the morale of the enemy has been denigrated or destroyed.

> The *morale* of an army and its chief officers has an influence on the fate of war; and this seems to be due to a certain physical effect produced by the moral cause. For example, the impetuous attack on a hostile line of twenty thousand brave men whose feelings are thoroughly enlisted in their cause will produce a much more powerful effect than the attack of forty thousand demoralized or apathetic men upon the same point.[20]

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[17] Napoleon Bonaparte as quoted in Canada, Department of National Defence. B-GL-300-001/FP-000 *Land Force Volume 1 – Conduct of Land Operations – Operational Level Doctrine for the Canadian Army* (Ottawa: DND Canada, DDAT, 1998), p 8.

[18] Canada, Department of National Defence. B-GL-300-001/FP-000 *Land Force Volume 1 – Conduct of Land Operations – Operational Level Doctrine for the Canadian Army* (Ottawa: DND Canada, DDAT, 1998), p 8.

[19] Ibid., p 9.

[20] Baron Antoine Henri de Jomini, *The Art of War* (London: Greenhill Books, 1996.), p 322.

This example is representative of the positive effect that good morale has as a force multiplier.

> After leadership, morale is the most important element on the moral plane of conflict. It is essential to ensure cohesion and the will to win. Morale is nurtured through disciple, self-respect, [and] confidence of the soldier in his commanders, and his equipment and a sense of purpose. Field Marshal Montgomery once said: "Morale is probably the most important single factor in war, without high morale no success can be achieved – however good may be the strategic or tactical plan or anything else."[21]

High morale of the individuals in a unit and good unit *esprit de corps* or cohesion are force multipliers. Within the military culture both morale and *esprit de corps* can be affected either adversely or favorably by the food or lack of food offered in an operational setting thereby making food an important component of war fighting on the moral plane as well as physical. Although physically, "weight losses of as little as 3 to 5 percent in 24 to 48 hours are primarily due to dehydration and will result in reductions in performance,"[22] these weight losses will affect performance and should be monitored. If food is inadequate, a decrease in combat effectiveness may be noted in as short a period of time as three days. However, as the model in Figure 1 indicates, well prepared, appropriate food can be attributed to increasing morale hence adding a positive value to operational effectiveness. At the least, often when it becomes taken for granted, well-prepared, appropriate food will have a neutral value on operational effectiveness.

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[21] Canada, Department of National Defence. B-GL-300-002/FP-000 *Land Force Volume 2 – Land Force Tactical Doctrine* (Ottawa: DND Canada, DAD, 1997), p 1-4.

[22] Bernadette Marriott, ed., *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations* (Washington: National Academy Press, 1995), p12.

"Food aids morale but only when it is liked and consumed; preference is indicative of consumption."[23] This again supports the requirement to ensure that food provided to personnel is well prepared, appropriate to the situation and meets their expectations. Figure 1 is a model of food and the permutations of its effects as they relate to troop feeding. Depending on the expectation, well prepared, appropriate food can have either a positive or neutral value on morale which in turn leads to a positive or neutral effect on operational effectiveness. "Battles, wrote Colonel Ardent du Picq (a French officer, killed in 1870), were won not by weapons but by men and nothing could be effectively planned in an army "without exact knowledge of this primary instrument, man and his moral condition at the vital moment of combat."[24] One way of trying to ensure that morale is kept at as high a level as possible is by the provision of food that is well prepared and appropriate to the situation.

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[23] R.J. Pilgrim, "The Components of Food Acceptance and Their Measurement," *The American Journal of Clinical Nutrition*, Vol 5 No 2, p. 171-175.

[24] Peter Paret, ed, *Makers of Modern Strategy: from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986), p. 515.

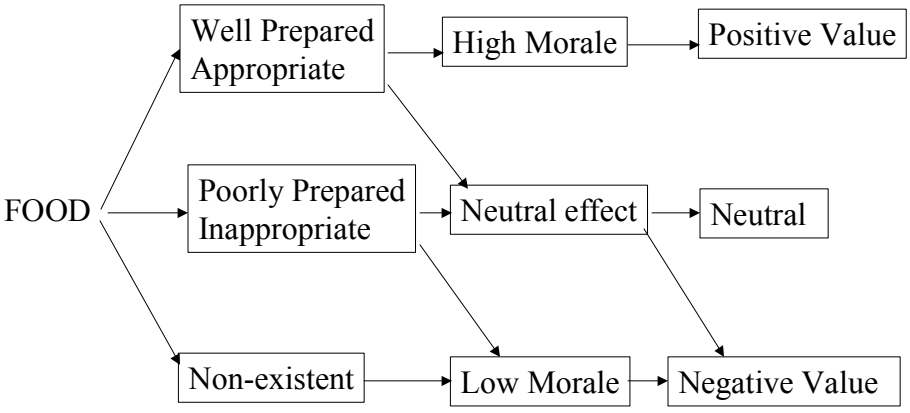

Figure 1 – Food and Its Effect on Morale

Food and Esprit de Corps

Cohesion is another word that describes *esprit de corps*. It is how the members of a unit feel about and react to one another. The stronger the cohesion within a unit, the higher their level of *esprit de corps*. "Cohesion comprises the general identification with a common aim or purpose, the means to concentrate force in a coordinated and timely manner and the maintenance of high morale…cohesion is an intangible but potent force."[25] As mentioned previously, cohesion or *esprit de corps* is one of the factors that can act as a force multiplier. "Cohesion is the glue that solidifies individual and group

[25] Canada, Department of National Defence. B-GL-300-001/FP-000 *Land Force Volume 1 – Conduct of Land Operations – Operational Level Doctrine for the Canadian Army*. (Ottawa: DND Canada, DDAT, 1998), p 16.

will under the command of leaders…Cohesion allows military forces to endure hardship while retaining the physical and moral strength to continue fighting to accomplish their mission."[26] It is this group dynamic that provides a unit with the *esprit de corps* that allows them to exist in the horrors of combat and to continue to fight. "At its simplest, cohesion is unity. It is a quality that binds together parts thereby providing resilience against dislocation and disruption. It minimizes vulnerability to defeat in detail and the adverse effects of pre-emption."[27] This unity or cohesion allows a synergy that increases operational effectiveness.

"Sharing food is held to signify "togetherness", an equivalence among a group that defines and reaffirms insiders as socially similar."[28] There is something intimate in sharing a meal with another person or group of people. Within our cultural boundaries, we normally only share meals with close friends and families. The occasions where we might share a meal with strangers are rare and usually in extenuating circumstances. In addition to sharing food to symbolize that we are part of a cultural group, "individuals consume more food in the presence of others than when eating alone."[29] This is an important aspect to consider when viewing food in regard to cohesion and operational effectiveness. A group with a high *esprit de corps* will tend to try to eat together, share

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[26] Canada, Department of National Defence. B-GL-300-003/FP-000 *Land Force Volume 3 - Command*. (Ottawa: DND Canada, DAD, 1996), p 1-10.

[27] Ibid., p GL-2.

[28] Stephen Mennell, Anne Murcott, and Anneke H. van Otterloo, *The Sociology of Food: Eating, Diet and Culture* (London: Sage Publications Ltd., 1992), p 115.

[29] Bernadette Marriott, ed. *Not Eating Enough: Overcoming Underconsumption of Military Operational Rations* (Washington: National Academy Press, 1995), p. 22.

food and, either subliminally or openly, encourage one another to eat. Figure 2 illustrates the effects that well prepared, appropriate food will have on *esprit de corps* and operational effectiveness.

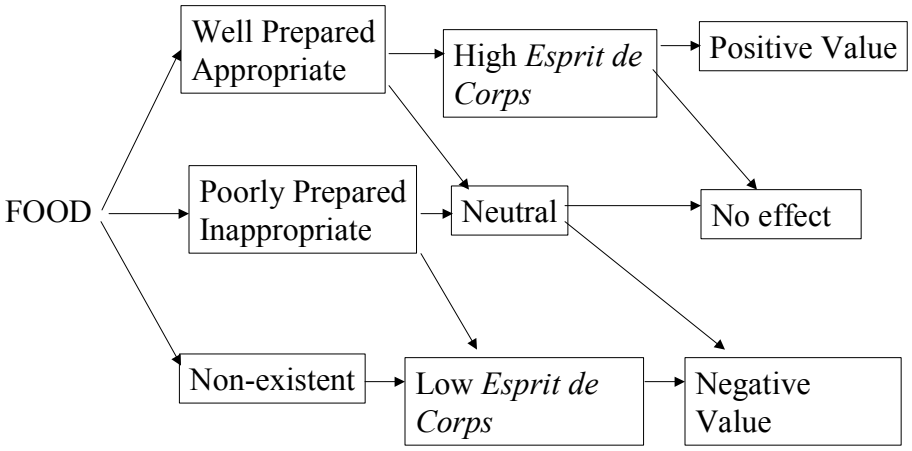

Figure 2 – Food and Its Effect on *Esprit de Corps* and Cohesion

Food and Leadership

Leadership can be narrowed down to the very central key of the commander's humanity or how he relates to others on the most basic of levels. Sun Tsu defined leadership qualities in the following way, "By command, I mean the general's qualities of wisdom, sincerity, humanity, courage and strictness."[30] Leadership involves

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[30] Sun Tsu, *The Art Of War,* trans. by Samuel B. Griffith. (New York: Oxford University Press, 1971.), p 65.

motivating people to do what you want, when what they often want to do, in the case of a military operation, is to respond to their natural desire for self-preservation and to flee in the opposite direction. "Leaders have to motivate soldiers to overcome their fear and confusion to defeat the enemy." [31] Leaders who can instill a sense of purpose and confidence in their soldiers increase their morale and their will to fight. The human factor is often overlooked in campaign estimations where sheer numbers drive the planning process. Although good leadership can have a positive effect on the outcome of an operation, food itself has no effect on the style of leadership or quality of leadership. No direct correlation can be made between food and the development of a leader or in his leadership style. The exception is that the leader is a human like everyone else and requires the same attention to his food to ensure that he is able to retain his own operational effectiveness.

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[31] Lieutenant General Paul Blackwell, US Army, retired and Lieutenant Colonel Gregory J. Bozek, "Leadership for the New Millennium," Military *Review*, LXXVIII No.3, (May-June, 1998), p. 44.

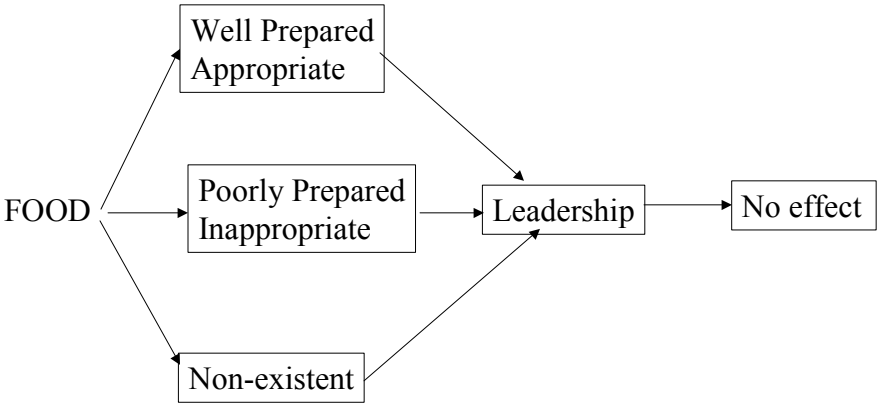

Figure 3 – Food and Leadership

Food and Training

In the training situation, well-prepared, appropriate food plays the same role as in operations. However, training is of itself, important for operational efficiency, "…and an army's performance will also depend on the degree to which its willpower and endurance have been steeled by familiarity with war, military spirit, trust in and devotion to the general, and enthusiasm for the cause."[32] Good training enables soldiers to perform tasks with minimum thought and to deal effectively with the realities of operations. However, most training situations are of such short duration and contain so many other factors that impact on the outcome that whether food is appropriate or not can

[32] Carl Von Clausewitz, *On War,* Ed and Trans by Michael Howard and Peter Paret, (Princeton: Princeton University Press, 1976), p 339.

not be analyzed. Therefore, training, although important of itself for operational effectiveness, has been deemed not to be affected in terms of well-prepared appropriate food and its effect on operational effectiveness.

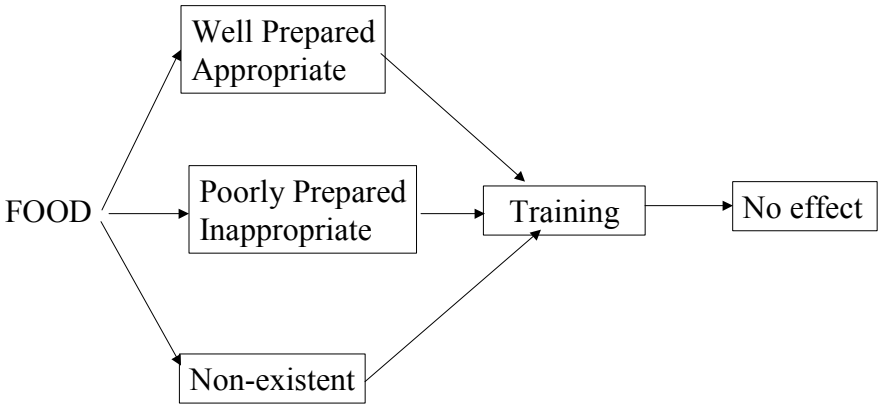

Figure 4– Food and Training

It is recognized that among other factors, leadership and training are both factors that both contribute to operational effectiveness. However, when examined in the context of this model of how food affects operational effectiveness, there was no direct correlation found. Hence, they will not be explored further in this context.

There are some who believe that "palatability and acceptability [of food] should be regarded as desirable but not essential requirements in operational feeding."[33] As this paper has indicated in the previous section, which was based on actual experience, if the food is neither palatable nor acceptable, it is not consumed. If it is not eaten, then it is not utilized to provide the troops with the required nutrients and energy needed to perform their tasks, their performance is lower and, as a result, combat effectiveness suffers – even to the point where it becomes non-existent – a situation that could result in mutiny.

[33] LtCol J.P. Crowdy, M.F. Haisman, and Captain McGavock, "Combat Nutrition: the Effects of A Restricted Diet on the Performance of Hard and Prolonged Physical Work", (United Kingdom, Ministry of Defence, Army Personnel Research Establishment, Report 2/71, April 1971), p 34.

Chapter 6 – Conclusion

This paper has explored the thesis that well prepared, appropriate food has a positive effect on operational effectiveness from a different perspective – a cultural one. Culture, an often-overlooked component of a force, was defined. Then, culture in terms of an organization was related to the military environment and further expanded to examine food in relationship to the military culture. It is recognized that food and food services in messes, part of the military organization, provide an important component to the socialization of civilian soldiers to the military. It is in the messes where *esprit de corps* is fostered. Culture is especially important in the context of food because our cultural orientation determines what is and is not acceptable as food.

Various aspects of the culture as they relate to food and food choice were explored including McDonaldisation, vegetarianism and food ignorance. The importance of these components was examined in relationship to the military environment and their potential impact on operational effectiveness. Soldiers, having been raised in our culture draw on that cultural orientation to determine what they consider as well prepared, appropriate food. The impact various cultural components play have an important role and have to be recognized and dealt with by leadership. It is this cultural orientation that affects food preference and, as a result, soldiers' nutritional status. Food aids in morale and this impacts on a soldier's will to fight. This is not to suggest that food is the sole

motivating factor that affects a soldier's performance, it isn't. However, food is one of the principal morale factors that is within the control of the leadership.

A variety of historical situations was presented where food was mentioned either as a direct cause of a mutiny or in more general terms in that the troops were not satisfied, for the most part, with what they were fed. Most references to food were negative. This tends to support the cultural belief of the low standard of military food and, as indicated in these circumstances, it was corroborated. Soldiers can endure a great deal of deprivation when they know it is of a finite duration. "Yet one can take it as a fundamental rule that hardship and privation, no matter how extreme, must always be treated as a temporary condition, which has to lead to a state of plenty- even at times luxury."[1]

Finally, a model was offered regarding the effect of well-prepared food on several factors including morale and *esprit de corps*, leadership and training as they relate to well prepared, appropriate food in terms of its impact on operational effectiveness. It was determined that morale and *esprit de corps* are most affected by food and these two factors were used in development of the model.

The aim of this paper was to increase awareness of food from a different cultural perspective within the military environment – operational effectiveness. At one end of the spectrum, where food is non-existent or of such a poor quality that it is not acceptable

[1] Carl von Clausewitz, *On War,* ed. and trans. by Michael Howard and Peter Paret, (Princeton: Princeton University Press, 1976), p 339.

or if the cultural differences of soldiers are not recognized and acted upon, mutiny can result. At the other end of the spectrum, well prepared food that is appropriate to the cultural orientation of the soldiers, meets their expectations and, therefore, is consumed has a positive effect on operational effectiveness. As has been noted, food has an important role in maintaining the will to fight. Any leader worth his salt, would be well advised to pay attention to the food served to his soldiers - not only in terms of the quality but also, particularly in coalition forces where we are dealing with soldiers from a variety of cultural backgrounds, in terms of their cultural requirements.

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