Color and Number Patterns in the Symbolic Cosmologies of the Crow, Pawnee, Kiowa, and Cheyenne.

By

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DEDICATION

This thesis is dedicated to my parents
Mr. And Mrs. Claude F. and Elverna G. Bell Eldridge

and

Erik A. Mallory,
my son

who understood the necessity of education.
Abstract

This study represents five years of research on the symbolic cosmologies of four Plains Indian tribes: the Crow, the Pawnee, the Kiowa, and the Cheyenne. Although the lexicons of the four tribes reveal many color and number patterns, there appear to be certain color and number categories that are more pervasive than others.

Review of the early ethnographies and folklore texts has found the color categories of red, yellow, black, and white to be significant symbols in both ritual and myth. Further investigation suggests symbolic patterns involving the numbers two and four are also important to the Crow, Pawnee, and Cheyenne. Kiowa ritual and folklore patterns reveal the numbers two, four, and ten to be dominant numbers. Through the early ethnographies, the color red and the number four, among others, were found to be symbolically significant. Red frequently symbolized the rank of a chief, a warrior, and a virtuous woman or wife. The number four often represented symbolic gestures or motions such as those seen in the arts of painting, dancing, or drumming. This symbolic linkage of color and number patterns has been expressed in rituals such as the Sun Dance and the Morning Star Sacrifice. The Sun Dance was practiced with variations by the Crow, Kiowa, and Cheyenne. The Pawnee practiced the Morning Star Sacrifice.
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Chapter One
Introduction

The purpose of this analysis is to discern a structural pattern, or order, related to the colors and numbers found in the symbolic cosmologies of four Plains Indian tribes: the Crow, Pawnee, Kiowa, and Cheyenne. The discussion includes a study of the structure and function of color and number symbolism in the early ethnographies and related folklore texts. Analysis of number and color frequencies through these materials discloses a predilection for cultural and ceremonial organizations structured around certain color and number patterns. Of special significance are the numbers two, four, and ten among and others. Ritually significant colors include but are not limited to red, yellow, black and white. Blue, green, brown, pink, purple, gray and orange are also important.

It is suggested the process of diffusion as seen in migration, language differences, trade, and conflict played important roles in the development of color and number patterns in the respective cultures of these Native Americans. According to Alice Fletcher, trade influenced the development of certain ritual patterns and designs (Fletcher 1902: 730). Trade often included complete ceremonies. For example, in the case of the Kiowa Sun Dance, it is known the Kiowa acquired the ceremony from the Arapaho who obtained it from the Crow.
Migration, agricultural effort, and revenge generated the necessity for further cultural development as seen in the art and ritual patterns of ceremonies such as the Northern Cheyenne Corn Maiden Ceremony, the Pawnee Morning Star Sacrifice and the Sun Dance of the Crow, Kiowa, and Cheyenne.

The polysynthetic nature of each tribes' distinct language possibly influenced the structure of certain cultural symbol systems such as the tipi color system, the Morning Star system, and the Pawnee Bundle System. The four tribes mentioned are members of four unique language families: Missouri-Valley Siouan, Caddoan, Kiowa-Tanoan, and Algonqian. These four language families have been found in areas other than the Plains and Rockies indicating possible migration from areas such as the Middle and Lower Mississippi Valley, the Upper Mississippi, and the region of the Great Lakes. Additionally, Kiowa-Tanoan language family has certain correlations with the Uto-Aztecean languages located in the area of Mexico.

Symbolic forms such as the morning star, the tipi, the sacred pipe stem, and ritual paints were either traded or acquired through conflict. The morning star symbol with variations is seen in the symbolic cosmologies of the Pawnee, Kiowa, and the Cheyenne. The concept of the tipi was also
exchanged among the tribes. It is suggested, the Kiowa obtained the concept for the tipi from their aggressive neighbors the Sioux. The color symbolism of all of the tipis was a very important means of communication. The color of a tipi could indicate rank of a chief or be related to other cultural functions.

The four tribes made use of Catlinite pipes and colorful red and yellow paints. Two sites relative to this trade are Red Pipestone Quarry, located in the Pipestone South Quadrangle of southwestern Minnesota, and possibly an ancient iron oxide mine located in the Leslie Quadrangle of Missouri. The quarry provided red Catlinite pipes while the mine provided hematite and limonite paints. Hematite ritual materials such as cones have been found everywhere in the Middle Mississippi Valley (Holmes 1885: 269).

According to Holmes' 1884 account: it was common knowledge the paints and particularly red and reddish yellow paints were in great demand among the tribes.¹ It was further surmised the bright red pigments obtained from the mines were distributed over a wide area (Holmes 1884: 269). The tunnels

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¹ The mines produced two types of materials: anhydrous sesquioxide (hematite) and hydrosesquioxide (limonite). Hematite in rock form is dark blue or purplish in hue. Hematite in powdered form is red. Limonite is yellowish brown (Holmes 1885: 269).
and galleries of the mines were numerous and extended twenty feet indicating the existence of an extensive industry in operation over a long period of time (Holmes 1884: 270).

To summarize, the process of diffusion as seen in migration, as well as trade, revenge, and other elements influenced the development of color and number symbolism as seen in the art, ritual, and folktales of the Crow, Pawnee, Kiowa, and Cheyenne. Analysis of the early ethnographies and related folklore materials reveals a collection of designs, rituals, and stories which incorporate elaborate patterns of number and symbolism. It is suggested these number and color patterns provided a system of symbolic patterns that created four unique cultural cosmologies.
Chapter Two
Theory

Certain scholars, among others, important to this research project include Fran Boas, the father of American anthropology, various structuralists such as Claude Levi-Strauss, and linguistic anthropologists Edward Sapier and Benjamin Whorf. Fran Boas provided an understanding of language structure and content as they pertain to the culture and symbols of Native America. Therefore, his research is of paramount importance when understanding the color and number categories of the Crow, Pawnee, Kiowa and Cheyenne. Edward Sapier's and Benjamin Whorf's theoretical work on cultural relativism as it pertains to language and content is also considered crucial to understanding the structure and process of the cosmologies of the four tribes.

During the course of this study, it became apparent the concepts of order, meaning, and function were of critical significance. Correspondingly, several other anthropologists, two art historians and linguists gave theoretical information that supported my analysis of the number and color dynamics residing within the traditions of the four tribes.

To begin, Franz Boas and the theory of historical particularism provides the basic rationale for this study. Number and color symbolism permeates the different and expressive cultures I analyzed. According to the tenets of
defined by language and given definition through the arts. Universal elements such as number and color categories are shared by almost all cultures. Number and color categories assist in structuring the art and culture of humanity.

Thus, the solidarity of social groups...the forms and motives for ordination and subordination; competition between individuals and between groups; division of labor, amalgamation and segregation; attitudes toward the supernatural--to mention only a few--may be investigated. These expressions of social life are generally valid. The same is true of mental states and processes. Fear and hope, love and hate, the valuation of good and bad... ...are general human characteristics that find expression in social conduct. From these studies a cultural morphology may be constructed...based on the variety of manifestations of these categories (Boas 1938: 675).

Boas' analysis of Native American art and language is very important to this study. Boas found the arts and languages of Native American to be very complicated and therefore difficult to classify. In his opinion, every attempt to classify their cultures became artificial because the result could necessarily reflect only one set of perceptions.

To explain, according to Boas, the genius of any culture resides in its language and its related processes of communication, i.e. the arts. The languages of North America are polysynthetic forming word-units (Boas 1908: 80). That is, all the languages have word-structures which contain a
great number of distinct concepts housed in a single word. Consequently, there is an absence of morphological distinction (Boas 1908: 74). This factor also made analysis very difficult.

It seems, however, that a theoretical study of Indian languages is not less important than a practical knowledge of them; that the purely linguistic inquiry is part and parcel of a thorough investigation of the psychology of the peoples of the world...language seems to be one of the most instructive fields of inquiry in an investigation of the formation of the fundamental ethnic idea. The great advantage that linguistics offer in this respect is the fact that, on the whole, the categories which are formed always remain unconscious, and that for this reason the processes which lead to their formation can be followed without the misleading and disturbing factors of secondary explanation, which are so common in ethnology, so much so that they generally obscure the real history of the development of ideas entirely (Boas 1911: 63, 70-71/Hoijer 1954; 92-93).

Additionally, the polysynthetic character of Native American languages has a relationship of correspondence with elaborate strings of decorative art motifs involving triangular and quadrangular shapes (Boas 1927: 232). These forms hold a variety of symbolic meanings.

Another important perception in Franz Boas' theory concerns the following: the principle elements that reside in the mind of a primitive individual occur in all races and therefore cannot be related to racial characteristics (Boas 1927: 125). In primitive culture, concepts and images are
always in constant flux. As a consequence, in primitive life, folklore, myth, history, religion, art, dance, and music are completely interwoven (Boas 1927: 209).

Further, the languages and the arts of these cultures indicate the existence of other levels of development and types of thought. Many of these are held at the level of the subconscious. Their origin and manifestation is sought in the unconscious process of the mind, the symbol. Customs and rituals, like the arts, are fraught with symbolic meaning and hold, unconsciously, earlier forms of behavior (Boas 1927:241-242). Therefore, folklore is of great importance in determining a culture's mode of thought (Boas 1927: 204). Folklore, nature myths, and the arts express these extended classifications of experience that underlie all symbolic patterns (Boas 1927: 143).

information on the relevancy of cultural centers from the standpoint of the theories of structuralism and gestalt. Linguist George Lakoff offered insight into the meaning and function of Integrated Cognitive Models and ordered pairs as they pertained to color and number categories in the folklore materials under study.

Sapir and Whorf were interested in language and its influence on all aspects of culture. According to the Sapir-Whorf hypothesis, a culture and its art are determined by language and its grammatical constructs. The Sapir-Whorf hypothesis further considers each language a unique universe giving rise to a relative social tradition. As a consequence no two languages ever can represent the same social reality. The worlds in which different societies reside are distinct worlds, not merely the same world with different labels attached (Hoijer 1954: 92).

Edward Sapir also said language is a perfect symbolic system which functions as a guide to culture (Mandelbaum 1963: 162). Further, any given language is also symbolic of a culture's experience (Mandelbaum 1963: 13). Often these experiences are considered magical when there is a close correspondence between an object and its name or concept (Mandelbaum 1963: 11).
Structural anthropologist Claude Levi-Strauss provided wisdom concerning the universality of certain patterns in folklore and mythology. His research on the dialectic of opposing forces as seen in the dualism of honey and tobacco is of special significance because dualism is an important cultural element among Native Americans. Dialectical elements can be either cultural, natural, supernatural or unnatural Many folktales, myths, and stories incorporate elements of dualism as an attempt to explain opposing universal elements such as: male and female; the sun and the moon; the sky and the earth, and so forth. Levi-Strauss also researched a South American folktale which has as a structural element the transformation of three individuals into stars (Levi-Strauss 1966: 57). This transformation star motif is also found in the folklore and mythology of the Plains Indians indicating the universality of certain cultural paradigms.

Additionally, Claude Levi-Strauss suggested that research on structural topics benefits from the application of the following cognitive tools: analogy, depth, juxtaposition, transition, opposition, and presentation. They guide the viewer through the deep structures of art, folklore and ritual. His theory proved to be extremely important when understanding color and number categories and their relationship to danger.
The theoretical position of anthropologist Kirk Endicott is also important to this study. He states there are two fundamental kinds of order: traditional order and abstract order. Traditional order is represented by shared beliefs and ideas of a given culture (Endicott 1970: 8). Abstract order is to be found in the analysis of traditional elements. It translates cultural elements of the traditional order into formal or universal ones (Endicott 1970; 5). Abstract order functions to explain the content of a particular culture (Endicott 1970: 5).

Its importance resides in its ability to structure the unconscious elements of a traditional order. A structural model can function as a guide to the culture. Structural analysis uses this type of model to translate cultural categories into universal categories of logic. According to Mr. Endicott, a structural model can also assist in revealing organizational elements residing behind the traditional order.

He further contends meaning in any given culture is shared and that cultural classifications normalize or regularize meaning. Accordingly there are three kinds of meaning: inherent meaning, relational meaning, and symbolic meaning. Inherent meaning refers to the essential characteristics of any object. Inherent meanings are distinct and do not merge into other categories. Relational meaning is
acquired through a conjunction with other cultural elements. Symbolic meaning builds on inherent and relational meaning (Endicott 1970: 11). Symbolic meaning is analogous. That is, one cultural element acquires cultural content from another cultural element through the principle of analogy. Therefore, symbolic meaning aligns analogous categories. They provide depth of meaning. Color is an example of a complex cultural element which lends itself to structural analysis. For example, color can have relational meaning. It can vary depending upon the quality of light. In certain cases, color can also have inherent meaning. Finally, color also possesses analogous qualities and can symbolize other objects and in so doing confer meaning.

Linguist George Lakoff, like Claude Levi-Strauss and Kirk Endicott, is interested in cognitive models. He has expressed concern with mankind's relationship to symbolic/conceptual systems.

Ordinary people without any technical expertise have theories, either implicit or explicit, about every important aspect of their lives. Cognitive anthropologists refer to such theories as folk theories or folk models...We even have a folk model of what categories themselves are, and this folk model has evolved into the classical theory of categorization...Part of the problem that prototype theory now has, and will have to face in the future, is that it goes beyond our folk understanding of categorization...And much of what has given the classical theory its appeal over the centuries is that it meshes with our folk theory and seems like simple common sense. It is extremely
important that we be made aware of what our folk theories are, especially in such fundamental areas as categorization, reference, meaning, etc. on which all technical understanding is founded (Lakoff 1987: 118).

Mr. Lakoff further suggests that many conceptual systems (such as color and/or number categories) are transcendental and do not possess a bodily nature. That is, they do not possess imaginative mechanisms such as metaphor. Yet, as conceptual systems they affect our imagination. As models they are often central to the construction of symbolic categories which we use to monitor experience. Mr. Lakoff suggests the following on the problem of conceptual experience: 1) thought is embodied, 2) symbolic structures grow out of related bodily experience, 3) symbolic systems can align with perception, bodily movement, and experience of physical and social character, and 4) since thought is imaginative, and not always aligned with experience, it can incorporate the principles of imagery, metaphor, and metonymy and as a consequence, it often expands beyond the world of representation (Lakoff 1987: xiv).

Mr. Lakoff is also concerned with several cognitive models. One is the Idealized Cognitive Model. Idealized Cognitive Models structure mental space.\(^2\) They also organize

\(^2\)Mars is an example of an ICM. Its meaning functions on a variety of different levels: Mars is a planet. Mars is also a mythological god of war.
the knowledge of any given culture (Lakoff 1987: 68). When present in myth, folktales, or stories they provide a view or gestalt. Such models can assist the power of reasoning and can be used to generate or predict the future. Other important cognitive models are the propositional model, the metonymic model, and the metaphoric model. The propositional model structures and links both conscious and subconscious elements of the mind with language, content, and logic. An example of a propositional model is: There was a strange sound coming from the depths of the forest. The metonymic model maps from one domain to another. It allows one well known object to stand on the whole or in part for another object (Lakoff 1987: 77). An example is the White House located in Washington D.C. The metaphoric model incorporates descriptive elements from the other models. Many metaphorical models are complex and map different levels of the minds. An example of a complex metaphor is: "Life is a journey" (Lakoff 1989: 91).

To summarize the theory of George Lakoff is structuralist in nature and therefore similar to that of Claude Levi-Strauss and Kirk Endicott. He is concerned about the affect of conceptual systems on mankind and considers it crucial that recent developments in the world of cognitive science and related technologies link in a compatible fashion with existing folk theories and their related models. He further
states there are several important conceptual models which effectively structure thought process: the Integrated Cognitive Model, the prepositional, metonymic, and the metaphor models.

Anthropologist Rodney Needham suggests the following: the function of any symbol is to evoke and sustain emotional commitment to a culturally relevant issue or event (Needham 1976: 5). For Mr. Needham structural analysis is one appropriate methodology to use in order to understand any symbolic classification. Like Boas, Needham, thinks all symbolic classification systems in a culture hold structural elements of a previous culture. He further suggests that any mythology is a form of symbolic classification. Myths and their symbols are viewed as symbolic models and mark what is culturally important.

Needham thinks there are several important elements in symbolic classification. One important element in symbolic classification is the principle of inversion. Inversion occurs when traditional roles and related symbols are for some reason reversed from the norm. The three other relation constants in a symbolic classification are: opposition (i.e. dualism as seen in kinship alignments), transition or the passage between one category and another (i.e. rites of passage), and presentation.
Additionally, there are several types of classification systems. One basic type is dualism. An example of a dualistic cultural system is a moiety which expresses a linkage of cultural kinship categories by pairs of lineages (Needham 1979:8). This repetition of a two-sided partition is viewed as an elementary mode of symbolic classification that identifies individual categories. Such classification is considered essential to thought and social action. Symbolic classifications can be used in a variety of ways: problem solving, jural discrimination, order, and speculation (Needham 1979: 250). Other symbolic classification systems included in Rodney Needham's theory are: triadic classifications, four-section directional systems, fifth partition and centered systems, seven centered systems (which are often correlated with colors), as well as systems involving eights, nines, and tens.

The analysis of color and its relationship to culture is a very complex issue in anthropology. Four anthropologists among others interested in the topic are Evelyn Hatcher, Marshal Sahlins, Paul Kay, and Brent Berlin. Evelyn Hatcher cultural relativist, suggests a linguistic methodology using visual metaphors when approaching the visual arts. Visual metaphors incorporate an understanding of color, line, bilateral symmetry (a metaphor for tension), and ambiguity (a
metaphor for the sense of mystery or significance (Hatcher 1985; 12).

She also contends the following: that perception is not just physiological, perception is learned (Hatcher 1985: 86). In keeping with this observation Hatcher further suggests human beings in every culture learn how to organize and interpret what they see and feel. According to Ms. Hatcher, sensation appears to be alike for all people (Hatcher 1985: 85). If there are distinct differences, they are do to a learned or shared experience.

Anthropologist Marshall Salhins suggests colors are used in cultures as semiotic codes in ritual, political, and social activity (Sahlins 1976: 3). Essentially, his thought on the subject is as follows: although human beings can perceive thousands of color hues and related shades, only certain selected colors are singled out as basic colors. These basic colors also known as the primary colors, the 'simple' colors, the 'primitives' or the Urfarben. The Urfarben are singled out and named because as distinctive features they transmit cultural information which is readily understood. Therefore, they serve as signifiers in every cultural information system. To summarize, color terms are seen in cultural categories and hierarchies where they function as valued mythical, artistic, ritual, social, and economic codes (Sahlins 1976: 8).
Anthropologists Brent Berlin and Paul Kay have researched basic color terminology and development. Berlin and Kay contend the classification of color terms is situationally universal in all cultures. According to the Berlin and Kay theory, core color terms are archetypes and are the names for broad categories of color, while specific color terms label a very narrow range of related hues. "Blue" is an example of a basic color term. That is, "blue" is the name for a category that also includes navy blue, sky blue, powder blue, turquoise, and so forth. Berlin and Kay also assert that there are sub-universal similarities in color perception where two or more languages have similar basic color terms. For example, two color terms of two different languages might be glossed as green and speakers of these two languages might also agree on what is the greenest example of green. However, boundaries for color definition can change. Some color classification systems include only two categories that of dark and pale. An example of a closely aligned archetypal color pair is black and white.

Although humanity can perceive thousands of colors, natural languages appear to limit the number of color categories labeled by basic color terms. They range in number from two to eleven. They have the following correspondences in English: black, white, red, green, yellow, blue, brown,
grey, purple, pink, and orange. These eleven color terms have a regular order of appearance cross culturally that is cumulative in nature. This regular order of appearance has been found to be very similar "from society to society." Berlin and Kay contend the pattern of appearance is as follows: if a language has only two color categories they are dark and light and the archetypical colors in them are black and white respectively. For the sake of convenience, Berlin and Kay use the archetypal colors and their core meanings as names for categories. Thus, they say that if a language has only two categories, they are black and white. If any language has three color categories then it has a category and term for red. If a language has four color categories then it always contains a word for green or yellow. If five categories are present then the language contains terms for both yellow and green. If a given language has six categories it has a term for blue. If seven categories are present, the language contains a term for brown. When a language has eight or more categories then it contains a term for purple, pink, orange, gray, or some combination of these categories (Berlin 1969: 3-5).
Table 2-1 Kay-Berlin Cultural Color Stages
(Berlin and Kay 1969: 22)

<table>
<thead>
<tr>
<th>Stages</th>
<th>Colors</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>black, white</td>
<td>two</td>
</tr>
<tr>
<td>II</td>
<td>red</td>
<td>three</td>
</tr>
<tr>
<td>IIIa</td>
<td>green</td>
<td>four</td>
</tr>
<tr>
<td>IIIb</td>
<td>yellow</td>
<td>four</td>
</tr>
<tr>
<td>IV</td>
<td>green, yellow</td>
<td>five</td>
</tr>
<tr>
<td>V</td>
<td>blue</td>
<td>six</td>
</tr>
<tr>
<td>VI</td>
<td>brown</td>
<td>seven</td>
</tr>
<tr>
<td>VII</td>
<td>purple, pink, orange, gray</td>
<td>eight or more terms</td>
</tr>
</tbody>
</table>

Also important is the partial order’s relationship with artistic development and cultural evolution. There is a correlation between the number of color terms and the level of cultural development; simple societies tend to have few color categories.

To summarize, Brent Berlin and Paul Kay have developed a theory of color perception and color term development which has applications for all cultures. This theory contends color terms are determined in part by anatomy. It also suggests an ordered progression of color classifications, the archetypical colors of which are potential symbols.
Two art historians whose theory has proved important are G. H. Gombrich and Rudolph Arnheim. G. H. Gombrich proved insightful in relationship to empathy, structuralism, and gestalt. First, he defends the theory of empathy as it pertains to physiogomic likeness in life and art. He considers ritualistic imitation, borrowing, or "likeness" an important facet of culture to understand when studying influential objects, rituals, and images. Further, he thought humanity had a tendency to project meaning into a work of art. In this case, there is a transposition from life into the work of art. Sometimes this projection has ritualistic implications.

Second, Gombrich is supportive of the theory of structuralism. According to the theory, universal laws and elements are seen as existing and forming patterns. The principles of design function as cognitive tools assisting the viewer in the exploration of artistic and cultural patterns. The principles of design are: repetition, alternation, harmony, gradation, unity, balance, dominance, contrast, opposition and conflict. Through application of these tools, the viewer is guided into the "deep structure" of a culture, art object, or ritual. Undefined elements and other ambiguities are also subject to analysis if they are manifest in the pattern (Gombrich 1970: 44).
Gombrich thinks gestalt theory is a field theory where every element in the field can have symbolic import (Gombrich 1970 51). Dreams, art objects, and rituals are viewed as collections of symbolic elements. Therefore the function of the elements of design become very important. The seven elements of design are: color, line, direction, shape, size, texture, and value (Wachowiak 1993: 13-22). These seven elements can form an infinite array of symbolic elements and structures.

Rudolph Arnheim also considers gestalt theory as important. One simple law of gestalt structure is as follows: in a state of equilibrium materials tend to be even or regular in distribution (Arnheim 1971: 5). Therefore, order is essential to cultural understanding as well as to structural function. Artists express order and universality through color and shape. In many cases, order is found in nature and in the concept of the center. Both order and center can be seen as a stimulus for natural creativity (Arnheim 1971: 3; 1988: 4). Cultural perception is not viewed as a mechanical recording of worldly elements but rather as the actual grouping of significant structural patterns (Arnheim 1954: viii).

To summarize, the anthropological theories of Franz Boas, Claude Levi-Strauss, Brent Berlin, Paul Kay, and others proved
to be very helpful in the analysis of the symbolic cosmologies of the Crow, Pawnee, Kiowa and Cheyenne. Additionally, linguist George Lakoff provided insight into the structural models that reside within language structures. It must be understood the reflections of art historians G. H. Gombrich and Rudolph Arnheim on the relationship of art and culture to cognition proved invaluable. Also important is Rudolph Arnheim's theory concerning order, disorder, center and their significance to culture and artistic development.
Chapter Three
The Process of Fieldwork and Methodology

Related Fieldwork

Fieldwork related to the symbolic cosmologies of the Crow, Pawnee, Kiowa, and Cheyenne has been initiated between the years of 1996 and 1999. Wanting to understand current, emic views on their symbolic systems, I made frequent visits to the Mid-American All Indian Center, and also attended Pow-Wows where I observed dancers performing dances in native costume.

The Selection of a Candidate(s) for an Interview

In order to further understand related color and number symbolism, I approached Helen Barnes, the Educational Curator at the Center, asking for the names of some individuals who would like to be interviewed. I was given the names of five people to contact for an interview. I contacted all five about being interviewed. All five either were busy with their personal lives. Eventually, Sue Morningstar, a member of the Pawnee tribe, agreed to give me an interview on her perspective of color and number symbolism.

The Process of the Interview

Remembering that a good ethnographer does not alarm the native (Malinowski 1922: 6-7). I suggested to Sue that we
Perk. It was chosen because it has a lively, college atmosphere.

I wanted the interview to be a pleasant occasion for all concerned. I felt I understood the process of good field methodology: "1. to have real scientific aims, 2. to have good conditions of work, and 3. to have a number of special methods for "collecting, manipulating and fixing evidence" (Malinowski 1922: 6). With this in mind, I decided not to take a tape recorder to my first meeting or interview. My questions ranged from topics related to color and number symbolism, and sage bundles, to folk tales, the Morning Star Sacrifice, Native American dictionaries, ritual, and earth magic.

Sue Morningstar, a very cheerful lady, discussed her spiritual interests with me while we dined on quiche and coffee at the Riverside Perk. During the course of the conversation, I learned the following: Sue's favorite color is purple because it is the most spiritual color with a refraction rating of nine. She also mentioned that she ritually harvested of sage and often tied sage bundles with a purple string. Sue explained the significance of her last name and in so doing talked about the Morning Star Sacrifice. She said it was held every spring until it was finally stopped
by authorities. Sue said it was initiated because of the garden and garden magic requirements.

I also learned that different tribes practice rituals in different ways. Mentioning that I was interested in finding a Native American dictionary or set of dictionaries, Sue said complete texts were often hard to find. Then, she mentioned that her grandmother had a tape filled with Pawnee songs. Later, I was told the tape could not be found. Currently, I am trying to meet with Sue to have lunch.

Conclusions on Field Research

My research on the languages of the Crow, Pawnee, Kiowa, and Cheyenne only delved into the language structures of the early folklore texts and the early ethnographies. Field research can prove extremely beneficial to understanding current developments in the symbolic patterns of an earlier culture studied.

Archival Methodology

The chapters in this work summarize my findings on color and number symbolism in the early ethnographies and related folklore texts of four Plains Indian tribes: the Crow, Pawnee, Kiowa, and Cheyenne. Included in the methodology of textual analysis are the structural processes of depth, analogy, metaphor, metonymy, juxtaposition, linkage and so
forth. These along with quantification analysis were used in the establishment of color-number frequencies.

My archival methodology took me deep into the ethnographies of the Plains Indian tribes. I researched and read the texts of scholars such as James Murie, James Mooney, Robert Lowie, George Dorsey, Alice Fletcher, George Bird Grinnell, and others. My research led me into the archives of the Lowell D. Holmes Museum of Anthropology located on the Wichita State University Campus, to the Special Collections of Ablah Library, to the archives of Bethel College, and to the Chicago Field Museum exhibition on loan to the Kansas State Historical Society in Topeka. I also learned, through correspondence, of the Plains Indian materials held currently by the University of Kansas in Lawrence.

**Future Related Research**

Research could be done on a family language tree or model of each tribe studied. A comparison of the Pawnee with the Caddo might possibly shed light on the origins of both cultures. The Crow could be compared to the Biloxi Siouan groups as well as to the Hidatsa. Further research could also be done in relationship to the Kiowa and their pueblo cousins who speak Tanoan which is related to the Uto-Aztecean family.
Introduction

The Crow (ap'saruke) and their symbolic use of color and number can be better understood if one knows something about their history. An informant stated the Crow came from a village known as the he’reo’ke “among them or in their midst.” This group formed a fifth village central to the four major villages once located along the Knife River in North Dakota (Lowie 1912:183). Rice gatherers and hunters in Lake Michigan's Green Bay area, the Crow migrated to the area of North Dakota and settled along the Missouri River. Once villages were established, the group initiated cultivation. Sunflowers along with squash, maize, and beans were grown. Additionally buffalo were hunted for flesh and hides.

Eventually the Crow left the sedentary life of the village and once again became nomadic hunters. By 1675 they had succeeded in becoming successful in the Bighorn Mountain Range and adjacent to the Yellowstone River. At first, they viewed themselves as three distinct groups: the erarap’io “kicked-in-their-bellies,” the a’c’araho’ “many-lodges,” and the mina’sepe’he “dung on the river banks—also known as the black lodges” (Lowie 1912:183). Later they split into two
related but distinct bands: the River Crow and the Mountain Crow (mine' sepe'he) (Bowers 1965: 1).

Through time, their Bighorn-Yellowstone homeland developed into an important center for trade. They traded horses, artisan products, and robes for European goods and maize. The Crow may have numbered between eight and ten thousand before the smallpox epidemic of 1782 (Voget 1995: 354). Crow industries developed in spite of epidemics. Cultural exchange occurred where patterns and symbols had a relationship to quantity and color.

Important numbers in the Crow universe included four (copium), seven(i)s'a'pua, ten (pir ke') as well as three (d'awi), five (tsax'u) and two (ru'pet). Culturally significant colors were white (tsi'a), black (cipita), blue (c'ua), red (hicia), and yellow (cir'a). The Crow saw the correlation between this cycle of colors and numbers and the ebb and flow of life as observed in the change of clouds and seasons. They further thought the cloud beings could be evoked for good fortune via various number-color spells which included fasting, body adornment, singing, dancing, drumming, sweating, and feasting.

**Number Patterns**

Four (copium) was perhaps the most important number to the Crow. It indicated at once the presence of the
supernatural and the unfolding to completion of any given event. Four (copium) was symbolic of the spirit guardians and their world. Four was the sun's own number. "The Sun said, 'To every undertaking there (were) always four trials'" (Lowie: 1918:14). According to Crow tradition, the world was created by four ducks who were joking friends of Old-man-Coyote.

Long ago all the earth was covered with water. Four ducks, who were inhabitants of the earth, met in a joking sort of way. ... They scattered the mud in the form of dust and formed the earth...They asked one another to make some inhabitants. They looked for Crow Indians (Lowie 1918:18).

Further, the Crow often saw themselves as moving in groups of four when having supernatural encounters.

When the four Crow came to the mouth of the hole, they had talked about what they were to do, whether to follow or not. "We have come a long way for buffalo, we might as well follow." They followed them into the cave, going downhill all the way. When tired, they stopped and slept. They did not know how many dogs were in there, it was dark. They got out of the cave on the other side, came to a river by the mouth of the hole, and saw plenty of buffalo. All four men took a bath, lay down in the shade and fell asleep. One woke up and saw something coming towards him. He awoke the three others. They saw it was a giant" (Lowie 1918: 216).

Crow tradition also presented four as a symbol which mapped matter. For example, a set of four medicine arrows of different colors often symbolized totality as well as direction. The folk tale of Spring Boy and Curtain Boy
included this colorful numerical plan.

Spring-Boy went home. He lay down one day and looked straight up, thinking about his brother. Then he saw in the sky a little hole through which his brother had been taken. He called out, "Mother!" "Yes." "I see where my brother was taken." He showed her and told her he was going up. He made four arrows, painting one yellow, one black, one blue, and one green. He went where no one could see him and he shot the first arrow into the air. This arrow was himself. He shot the second arrow into the air, then the third farther still, and with the fourth he landed where his brother had been taken (Lowie 1918: 83).

Other examples where four was defined as a beneficial energy included Four Leaves or Mountain-weed, the four seasons symbolized by four colors (red, yellow, white, and black), and the rituals of the Little Dog Society which used songs and whistles to the four directions for ritual healing.

A friend whistled southward, then west, then north, and at last he blew east. Then He'ara'wic came to his senses and said, "Do it again." So he (the friend) blew toward the four quarters again...All the bad things inside came out. Baby ordure came out of his mouth and a woman's garters and some woman's moccasins came out" (Lowie 1918: 199).

Another example reads as follows:

She told the captives: "tomorrow they will place four skulls on the ground. You will have to step over the four buffalo skulls and if you don't slip you may take the boy home. If you slip on one of them they'll kill you (Lowie 1918: 240).

Crow burial ceremonies also included the number four. When an individual died his body was wrapped in the yellow part of the tipi cover called aede'cire (Lowie 1912: 226).
Then the body was placed in the fork of a tree or on a burial scaffold of four forked poles (Lowie 1912: 226).

Therefore, the Crow saw everything governed by the number four. Four ducks and Old-Man-Coyote symbolized creation. The four directions represented the healing universe. Finally, four played a part in burial ceremonies where the construction of burial arbors had four forked braces for the body and its platform and body.

The number seven (i)s’a’pua referenced several categories for the Crow. It symbolized supernatural assistance in the face of danger, the consumption of something forbidden, and the subsequent transformation of human children into stars. Seven Buffalo Bulls, the Seven Brothers, or the Seven Stars, and the Seven Cranes had correlations with the Big Dipper.

The Seven Buffalo Bulls came to the rescue of an orphan boy who had been abandoned in a buffalo wallow. When all the people had gone away, seven bulls came along. The first bull came up and saw the little baby crying...The child followed the buffalo. In cold weather he lay on the buffalo where the hair was thickest. When they were going off some place, the boy would sit between the horns...about the time of the buffaloes' mating season, the seven returned to the herd ...When there they begin to flirt. The seven bulls told their child, "We're afraid of nothing in this herd except of All-bones...You might be tempted to drink of his wife's water, don't drink of it ...but the seven bulls' child had drunk of it...He came to his fathers. "We warned you not to drink of it, it's all over with us now" (Lowie 1918: 161-162).
The seven bulls killed by All-bones were seen as the Seven Stars. Seven was also a number of creation or origin. In the account of the Seven Dipper Stars (i gye' sa'`pua) Redwoman (Hi'ciatawi`a), had a spring where the wife of her brother (a supernatural water animal) wanted to drink. However, in order to do so the wife had to fulfill certain ritual obligations, such as stepping on or close to an old buffalo skull. These rites included the number seven and made allusions to death and resurrection.

In order to get to a spring where their water was...they had to step on an old buffalo skull...The young man took his wife out for a bath. She had her robe tied and a buffalo skull was there...He bade her stand on the skull. "No, I might as well die on the ground." Then moles came digging where her feet were...When the ground was soft, her husband said, "Fathers, here is what you want to eat (on river bank)." She slipped through the hole, pressing against it, and he went over the bank into the river. "Fathers," he cried, "it is I." But they did not care and ate him up...After the fathers had eaten up this man they found who it was and made him alive again. It took a long time...then he told his sister (Red-woman) and she started after the girl...ed-woman ran and seized a little boy and held him by the throat...He had a tiger and a bear. They attacked and killed Red-Woman...The little boy had seven brothers...hey said there were too many evil things on earth, so they went up and became the Seven Stars (Lowie 1918: 204-208).

Additionally, seven was a number sacred to medicine counseling. The Seven Star persons (igyey sa'`pu) were thought to be counselors to the Crow. According to legend, the Seven Cranes distributed medicine (baxpe`) and tobacco to
those seeking vision. The Seven Cranes and other birds were credited for giving the Crow the sweat lodge. Seven was important in sweat lodge construction and procedures. Seven willows protected visitors to the lodge which was constructed using seven willow sticks (Lowie 1918: 158-161). Here again surfaced the mysterious relationship between the number seven (the night and the Seven Dipper Stars) and tobacco. The sweat lodge was a place where there was tobacco, healing and ritual sharing. Seven was the number of tobacco.

Seven Cranes came and sat down by the Crow...One crane wanted to give him medicine to become a war captain...The next crane wanted to give him a picketed horse as medicine... The next crane wanted to give him medicine for coups...The next crane offered to give him medicine for doctoring...The Seven Cranes came and sat by him, smoked with him, and said they would take him... He set out on the back of one of the birds. Finally they came where the sky touched the earth and stopped. All the birds liked him and wanted to touch him. The next day all the birds got in a row near the sky-hole with the Seven Cranes on the left end. With his pipe he raised the sky and told the birds to go. He lifted it (the pipe) high enough for the six other cranes and himself. The sky closed down...they flew over the water and saw a black spot.... bird said that spot was his land and the man would see it...The birds had tipis. The first one was the Meadowlark's painted yellow and with the top black. The Bluebird's tent was all blue...the chief of the yellow cranes had a big yellow tent...(Crow) had no meat while there...he shot a deer...Thereafter the Cranes ate meat...There was no winter but plenty of cherries and plums...They made him wings and he flew with the Seven Cranes...They came to a place where the sky touches the earth the big crane gave the man a pipe...He took the medicine of the crane, hawk, and
a condor. The big crane himself gave him medicine, so he had four medicines" (Lowie 1918:159-160).

The young man was told by a bird visionary to go back to his people and to construct and use seven sweat lodges (Lowie 1918: 159-160). Eventually the youth found himself to be a successful warrior with two wives and a son who became a war leader (Lowie 1918: 161). This myth indicated the number seven linked with magic and was a key to personal power and success. In the first two tales there were allusions to sacrifice and cannibalism. The number seven also seemed to be related to water and to the danger surrounding obtaining it. All three tales contained elements of danger. The seven cranes folktale contained images of the sky meeting the earth which would indicate a different space. The problem of transcending that space appeared to be of paramount importance. Evidence for this position can be seen in the development of rites of incorporation which included the construction of seven sweat lodges. Thus, the seven crane tale is ultimately post-liminal in focus incorporating new values as a means of separating from a previous existence.

Ten (pir ake') was the number of historical celebration but also of ritual payment.

At the Fourth of July festivities in 1910 ten men walking abreast enacted a scene of the old martial days. Nearly all of them had their faces blackened with charcoal (Lowie 1924: 365).
Ten was the number of Morning Star, the grandchild of Old Woman. Ten was symbolic of power: "the grandmother said, 'You have brought something powerful'. Inside the lodge there were ten buffalo and ten buffalo calves" (Lowie 1924: 112-113). Ten was the number of time and gestation. The Crow counted by tens. Crow payments were often counted in tens. "They gathered ten tongues and some of the best meat... One-eye told him it was well" (Lowie 1924: 178).

Another example reads: "Black Elk gave ten feathers apiece to the men" (Lewie 1918: 230). In "The Son-in-law’s Tests" the son-in-law had to find a way to pay his father-in-law ten arrows made with blue points or he would be cast out of the household for the winter:

What is he up to now?" "He wants a cedar bow with all the sinew backing completed. He wants ten arrows and tells me the arrows must be without a knot with the best eagle feathers and blue points (Lowie 1918: 151).

In Crow folk literature, horses were often grouped in tens. "They gave the boy ten horses and asked him to look for the drowned boy" (Lowie 1918: 132). Sometimes a woman was wooed with a set of horses. "Once a man brought ten horses in order to get her, and there was a good-looking (blue) pinto among them" (Lewie 1918: 107). According to informants, the festive Horse Dance (its’in-dis’ua) always had ten times three men (i.e. thirty). The thirty men centered around an esoteric
element in the Horse Dance Society, an elixir made from a root. This substance was powerful medicine and was said to reduce exhaustion in horses and humans (Lowie, 1924: 329).

The number three (d'awi) was categorized with ritualized fertility. Indications of fertility rites were seen in several of the Crow folktales.

Old-Man Coyote would have his will of any women he came to. Once he got to a tree, and in a clearing he saw a beautiful girl disrobed...he attempted to possess her, but she rose and turned into a box-elder tree and his member was stuck in an aperture. Winterbird said, "Elder brother, what are you doing?" "Tell my sisters I am caught in a tree." The bird told three female beavers who came and began to cut down the elder. (Lowie 1924: 46). He warned him to be careful lest they bite him. So they cut the tree in front and behind and split it. The blood of his organ was in the tree and since then all the box-elders have blood in them. The box-elder is a wood that returns in kind. The parting of a woman's hair is like the inside of a box-elder (i.e. the latter represents nice red paint) (Lowie 1924: 46)

In the folktale "The Dwarf's Ward" three symbolized magical sexual encounter and was classified with physical weakness. To elaborate, a young man was counseled by an older woman. The advice given the youth was sexual in nature and concerned with his immediate safety. According to the folktale: three (d'awi) lovely Crow women were tanning hides in a nice tipi and were sexually available. The old advisor was concerned that the young man would be helpless among them. The old woman (said) "she (one of the young women) will say,
"Let us sleep with you and then we'll let you go." "Of course you'll be helpless and do it" (Lowie 1924:167).

This folktale possibly provided mythological justification for ceremonies such as the Crazy Women's Dance (*b'ia war'ax dis'ua*). Married men were usually barred from participation, leaving single men free to attend (Lowie 1924: 360).

One woman, who acted as leader, carried a six-foot pole with sleigh bells...partners kissed each other... and painted one another's faces with a red strip around the eyes (Lowie 1924: 361-363).

In Crow symbolism three is closely related to four and pushes for completion. In the folktale the "Son-In-Law's Tests," a ritual test with impossible tasks was imposed on a son-in-law by a girl's father. According to the text, success could only be achieved through the intercession of a supernatural helper:

A man had a good-looking daughter. A young man married her, then her folks left camp and went with her to some other place. When they came back to camp, the husband had disappeared. This happened to three men, one after the other" (Lowie 1924: 149).

As the text states, three of the young men who married the girl had failed to win her from her father through a ritual test and had disappeared. The fourth husband completed the impossible tasks imposed by the father-in-law via the supernatural assistance of a magic bear and a cave filled with
sarvis-berries (Lowie 1924: 150). Three is also ritually important with three motions or feints often being the prelude to an act of completion on the fourth move (e.g. the Sun Dance).

Two (ru'pet) and classifications of two suggested a linkage of categories by pairs (Lakoff 1987; Needham 1979: 8). This suggested that two was a ritual number:

In the Goose Egg Dance (bi'ra i'ge'disu'a) "All the good-looking women, married and single, came two abreast, led by two chaste girls and six male singers. They walked through the camp and stopped in the center" (Lowie 1918: 302).

Two was also used to "double" the basic numbers of three, four, and five which made them the more preferred medicine of six, eight, and ten. Two was important in Crow gambling and games of chance.

They played four games and then stopped. The next day when they started the rival said, "I'll bet the two horses I won." The young man won them back. The loser's father visited his son and asked him about it. "He used his hoop (a lunar symbol) and broke mine and won back two horses" (Lowie 1918: 201).

Also related was the role of two (ru'pet) as a payment for revenge. Buffalo tongues were often awarded in twos to superior warriors (Lowie 1915: 44). Additionally, the warrior columns in the Sun Dance ceremony marched while moving in twos (four warriors on the left and four warriors on the right.
Thus, number two functioned to establish social rank and indicated a numerical order to power.

To summarize, numbers played an important role in Crow culture. Numbers when utilized in the correct sequence became a magical formula for health, well-being, and revenge. Evidence of this esoteric numerical cycle or sequence can be clearly seen in a ritual utilizing water in conjunction with a sequence of numbers evolved to assist in the healing process: "In the first sweating they used four cupfuls, the second time seven cupfuls, the third time ten cupfuls, the fourth time uncounted cupfuls" (Lowie 1915: 245). This sacred design of numbers represented an attempt to communicate with heaven and the host of supernatural beings. Spiritual requests included the power of vision and divine assistance. For example, four cupfuls of water would call the sun and the four directions. Seven cupfuls of water would summon the Seven Stars. Ten cupfuls would awaken Morning Star. The fourth sequence of cups of water was random and symbolic of not only the sun but also of Old-Man-Coyote. Crow number patterns functioned as a means to create an elaborate classification system for the Crow which we define as a cosmology.
Color Patterns

The Crow have eight colors and at least four color categories. They were important in establishing the Crow universe (Lowie 1915: 12;15;22). White (tsi’a), gray (xí’ri) blue (c’ua), black (cîpîta), green, yellow (cîr’e), brown, and red (hîcîa) had specific social functions. Colors functioned categorically in everyday life as well as ritual. Special colors and furs were used for dress and for ritual objects (Wissler 1915: 64,70). In Crow folk tales, color functions as a cultural code. For example, social encounters can occur with animals, plants, and magical characters who often had a precise color correlation. Color indicated their situation and social function. Both white and gray were symbolic of magic, the supernatural, danger, and sometimes death. The Crow often spotted their hair with white clay (Denig 1953:33). In the folktale "Thunderbirds," something unidentifiable and white was seen lying in the grass. The event aroused fear but also awe:

Once on the prairie (he) saw something white moving in the grass. He went with the bow and touched the white thing. It burst, he did not know what became of it. Looking round, he saw it alight on a long mountain. There was no road to get up there. He lost his senses altogether. (Lowie 1918: 144).

Crow garden magic revolved around cultivation of the tobacco plant with its white flowers. Correspondingly, the meaning of tobacco linked with white medicine and power but
also to the white of danger and poison (Levi-Strauss: 1973:60). Thus, a ritual was needed in order to understand under what conditions tobacco might or might not be safely used. The Crow would often sleep, seeking vision, in the tobacco garden (Lowie 1919: 170). White and gray also symbolized ghost energy. This image functioned to alert the Crow of the possibility of poisoning, illness, accident or some sort of supernatural encounter. For example, "there was a man named Looks-at-the-White-Buffalo. He could not be shot in battle" (Lowie 1918: 175). Another example which alludes to the danger of white reads:

Their mother told them there was a white tipi that was very dangerous" (Lowie 1918: 81).

White also functioned to communicate fear: "She was afraid...She told him of a tent on a ridge, a white tent, and asked him not to go there at all" (Lowie 1918: 72). White also had a relationship with the mythical heroes Spring Boy and Curtain Boy and their torturer Long-arm: "He came to another big camp where the tipis were all white. They belonged to the white-hawks. That night in bed he asked "Has anyone been taken past here?" A woman responded: "Long-arm got one and passed by here" (Lowie 1918: 97). In this case, the color white alluded to a ceremonial rite of passage where the right to avenge a death was received (e.g. Sun Dance). White was also classified with a supernatural or magical
transformation process (e.g. salt or baking powder). While he was out, the boys took his bag and untied it. It was found to contain some kind of white powder. This powder caused a "tingling sensation when applied to the body" (Lowie 1918: 87). Finally, white clay paint was often used in ceremonies to attract spiritual help: "He told her to paint the horse's body and mane with white clay, also round the eyes" (Lowie 1918: 139).

Blue and green sea shells of "an angular shape" were often worn "in large slits through the ears" (Denig 1954: 33). Blue (c'ua) was classified with the Morning Star the father of Spring Boy and Curtain Boy. (Lowie 1915: 12). Blue was also the color of magical transport, (the number ten), and certain supernatural patrons: "four ducks were there awaiting: their heads were blue. One of them said "Get on my back and do not open your eyes till I tell you" (Lowie 1915: 154).

In the folktale "The Poor Couple befriended by the Moon," blue formed a cognitive link with an image of a knife. Here, a woman dressed in an elk skin gown and carrying a blue-handled knife befriends a lonely couple digging for roots (Lowie 1915: 187). Blue also linked the categories of the moon and gathering. However, exploration of a variety of texts did not reveal the existence of a gathering ritual revolving around the phases of the moon. "We are still far
from knowing either the function or the manner of operation of every single rite, and we lack the knowledge necessary to construct a definitive classification of rites" (Gennep 1960: 4).

In "The Thunderbirds," blue has a symbolic correlation with a butcher as well as the feast. Thunder came and sat down. He knew they had captured Crow. Thunder told the bird to go up high into the sky and to shout and bid all the birds come because their child had killed something for them to eat. Then the cu'ate, the blue crane heron, (came), assisted and chopped it (the food) into two parts. The smaller birds cheered and ate (Lowie 1915: 148). In this tale, the colors of blue and blue-green also indicated the existence of sacrifice and celebration.

Black (cipita) was a color of strength and aligned with magical power for protection, revenge and supernatural assistance:

A dwarf had killed a black-tailed deer. "He dipped up the blood with his hands and gave it to the young man to drink...Take the blood to your wife (who is pregnant) and make her drink it, do to her as I did to you...(Later)...the young man's wife gave birth to a little boy and the dwarf named him "His-arrows-plenty-of-lightning" (Lowie 1915: 172).

In another tale black is symbolic of immortality and power:

"The boy got the black horse the river man had told him about...The boy painted his horse...put a plume under each hoof and came on the ice...He could not be killed. Both ran to the ice hole and turned.
They started to make medicine again" (Lowie 1915: 181).

In the folktale of the deserted children:

"One man went to the door of the black tipi and asked who was inside. They told him they were the lost children, but that none of them died (Lowie 1915:224).

Black (c'ipita) in Crow folklore also had a relationship with supernatural strength which was derived from an element of nature: a black-tailed deer, a dwarf, a black horse, or a black tipi. Black held a connotation with the power of survival.

Yellow (cir'e) was a complicated symbol in Crow folklore. The faces of the Crow were often painted "with a tinge of yellow on the eyelids" (Denig 1953: 33). The Yellowstone area of Montana was known for abundant food supply and associated with fertility (Lowie 1918:188). Its fecundity influenced the development of the concept of fertility and the subsequent development of cultural food patterns, ethical patterns, and the joking relationship. Also, yellow referred to a state of plenty, pregnancy, increase, or abundance (e.g. swelling). To elaborate, buffalo calves were a light honey brown in color. Their increase insured a secure food supply. The sexual activity and growth of the buffalo herd guaranteed physical well being for the Crow. However, yellow defined
abundance in both positive and negative ways - hence magical transformation.

It was Old-Man-Coyote. He was going about, looking for food. He went where there was a great many buffalo tracks. He got there trotting. A yellow calf was lying in the buffalo track. Its feet were swollen "e'e-k a!" he exclaimed, "this younger brother of mine is miserable. I'll put you on my back and shall soon catch up with your mother." He carried it (the calf) on his back, he took him along the tracks, he got tired. "Elder brother," said the calf, "you are tired now, kill me and eat me." "My dear brother, do not say that. If I killed you, my bad joking - relatives would laugh at me." We do not know who Old-Man-Coyote's father was. This is why we practice the joking-relationship (Lowie 1918: 30).

Other allusions to increase can be seen in the following passages:

Old-Man-Coyote was very hungry...He came to a yellow tent, the Owl Chief's tent, stood outside and called in...The owl told him to come in...His wife pierced his eyes, and grease came flowing down on the bark...it was transformed into a fine meat...He gave some to Old-Man-Coyote who ate some of it and kept some for his wife and children (Lowie 1918: 38).

Then...

Old-Man-Coyote went to a yellow tipi with a black top. It belonged to the condor. The condor told his wife to bring some big pieces of bark. When she brought them, the condor covered himself and the bark with a blanket, the bark had turned into fresh meat. They cooked it over a fire (Lowie 1918: 39).

Finally, allusions to yellow and excessive or supernatural fertility can be seen in the next passages:
An orphan, Plenty-badger (Awatsi'ahue), was spurned. He stayed at the same place crying all night... It was the fifth day since he was without food or drink. He crossed a creek and an old skull of an elk with the antlers was there. He held one of the prongs and cried. He cried until the skull spoke, saying: "You make too much noise while I'm sleeping. What are you crying for?" The elk transformed himself into a fine-looking man, using his own skin as a blanket with a feather tied in it. He painted his face yellow and on his cheeks he put deer tracks on his cheeks. The elk said, "I can get any woman that ever lived. He made a whistle, and on it the picture of an elk. He whistled up the creek and many female deer came. There is nothing hard for me to get (ba'waru'wa'tsereta'rik). "You'll be the same. You may turn into an elk four times...You cannot do it any more after that." He showed him how to make medicine, then went away (Lowie 1918: 192).

Allusions to fertility and abundance can be seen in all five of these stories. The elk man painted his face yellow and was transformed into a shaman who had the power to draw the swell of female deer near his blind. Here yellow is used categorically as a symbol for plenty.

The Crow often painted their faces with red paint (Denig 1953: 33). In Crow folklore the color red (hicia) was categorized with magic sticks, the hunt, the Seven Dipper Stars, and water. By way of example, Red-Woman (Hi'ciatawi'a or Red-stone-woman), an important folk character, was portrayed as armed with a magic stick or staff (Lowie 1918: 128). "Her magical powers included raising the dead: "I'll make a dead body get up again in four days" (Lowie 1918:28). "Her medicines go as fast as the wind and she can foretell
the future from the clouds" (Lowie 1918: 80). Hi’ciatawi’a often appeared at skinning sites wanting meat: "Here, bring the hind quarters and four legs over to my house over there" (Lowie 1918: 80). She also had correlations with springs and the Seven Dipper Stars whom she had killed. "Thus she killed all seven brothers...Then "The seven brothers went up to the sky and became stars, but the boy remained separate, near the seven stars. This is how Old-Man-Woman's-Grandchild's grandmother was killed" (Lowie 1918: 126).

Further, Hi’ciatawi’a's staff had correlations with water magic: " she took her root digger and drew a line with it, which turned into a swift stream" (Lowie 1918: 205). Hi’ciatawi’a and her younger adopted brother also had a spring. "In order to get to the spring where their water was, they had to step on an old buffalo skull (Lowie: 1918: 204). The presence of the buffalo skull and spring of Red Woman alludes to the Seven Dipper Stars, their mystery, and to the Sun Dance, a rite of separation.

A set of twenty red staffs is a ritual element in the Crow ceremonial life known as Cooked Meat Singing.
Cooked Meat Singing or Iiru'koce warax'ua was a dream feast. The feast was arranged in response to a dream of an individual in the community. When arranged, a messenger invited only certain people to the feast and those who came had to bring medicine rocks (baco'ritsi'tse) (Lowie 1924: 349). Each of the guests (there were usually twenty) had a stick painted red. These sticks were placed behind the lodge pole (Lowie 1924: 350). The feast took place at the time of the first snowfall. There was a buffalo hunt. A strip of tender meat four feet long was taken from along the backbone and used for the feast. Additionally certain circles or stands of berries were chosen by a visionary (Lowie 1924: 349). Then the wives of the visionary along with four women boiled the bones of the buffalo. The berries were smashed and mixed with the marrow and meat. Some of the pemmican was molded into a bear effigy (Lowie 1924: 349).

**Sun Dance**

Color and number patterns were very important to the Crow Sun Dance. The most significant ritual number was seven (Voget 1995:355). Seven was the number of the Seven Dipper Stars and held symbolic correlations with seven buffalo skulls used in the Sun Dance ritual. Other important numbers were two, four, five, eight, and nine. Important colors were red, white, black, and blue-green.
From the data collected on the Crow for the years ranging from 1830 through 1874, it was surmised that the Sun Dance was performed once every three or four years (Lowie 1915: 10). Although the Sun Dance was performed in the 1970s, the last Crow Sun Dance prior to 1900 was performed in 1875 (Lowie 1915: 5). The schism of the Crow band into two distinct groups was reflected in two versions of Sun Dance.

The River Crow Sun Dance was closely related to the *Hidatsa* hidebeating ceremony where the principal actors were Long Arm and Spring Boy (Voget 1995: 356). The Mountain Crow *Acki'ciru'a* ceremony appeared to have evolved differently. They traced their Sun Dance pattern to additional cultural heroes such as *And'ici'opc* who had mystical adventures which occurred in a mountain setting (Lowie 1915: 13). Both versions were performed for revenge related to the loss of a brother or child. They were at once rites of both separation and incorporation and held specific number and color symbolism.

The River Crow ceremony usually lasted four days with ceremonial preparation of the initiate taking place on the first, third, and fourth days. The third day was the principle day of endurance (Bowers 1965: 319). On the first day, the Long Arm impersonator painted the pledger with white clay from the hills around the Knife River near the town of
Golden Valley (Bowers 1965:7). Clay which had been mixed with water to make paint was held at the area of the two centrally located mounds (Bowers 1965: 317). Once his entire body was covered with white paint, black designs were placed on the pledger's forehead, cheeks, nose, and ankles. These designs were most often of the horns of the moon (Bowers 1965: 317). A willow hoop symbolizing the moon was also a part of the costume (Bowers 1965: 317). Two objects utilized in part of the ritual were the sacred arrows and the sacred ax (Bowers 1965: 308). After the ritual endurance was completed, a retreat from the ceremonial grounds for rest and dreaming occurred. The final and fourth day of the ceremony concluded with a sweat lodge ritual purification. The body of the initiate was treated for injury and was rubbed with dark sage (Bowers 1965: 320). Food was prepared by the wives of the Long Arm Impersonator (Bowers 1965: 320).

However, according to Sharp-horn's account, the Sun Dance took approximately nine days. Seven days of preparation included building a preliminary lodge, fasting for approximately four nights, the bull hunt, the search for the lodge poles, the erection of the sun lodge, with the remaining two days reserved for the ceremony (Lowie 1915: 26-50). A captive woman assisted the virtuous woman, the berdache, and his ax with the main lodge pole (Lowie 1915:
26-50). The virtuous woman's hands were blackened. Sometimes she was painted red (Lowie 1918: 286). Before the tree was cut, the three positioned themselves directionally: the virtuous woman faced west, the captive east, and the berdache north (Lowie 1918: 32).

During the bull hunt, a group of five to eight men hunted only for tongues (Lowie 1915: 10). The tongues were grouped in sets and sliced and often distributed by twos just as the young men undergoing the ceremony would often be grouped in twos. On the first night of the ceremony, men of fame in the group had their wives paint themselves red. They also were painted with medicine designs. Then, the red painted women cooked the buffalo tongues collected in the hunt (Lowie 1915: 44). These were distributed to singers, musicians, and others who helped with the ritual.

The significance of the number four to Sun Dance can be seen not only in the construction of the Sun Dance Medicine Lodge which was raised on four poles, but also in the dance of the Eagle Medicine Man who “made three stops along the way to the lodge, arriving at its west end on his fourth stop” (Voget 1995: 358). Here, the musicians assisted via song and drumming: “the drum only stopped four times during the day” (Lowie 1915: 48). They created “ritual time.”
The Mountain Crow version of the Sun Dance, Acki'ciru'a was also ceremonially performed to gain supernatural assistance for revenge due to a death. Usually the death concerned a child or younger brother (Lowie 1915: 9). This version of the Sun Dance has four major participants: (acacia) the "whistler - initiate" who was seeking personal revenge, (ak'ba e'extsia) the "whistler-shaman" who was the owner of the doll (mare'wir exbak'e) (Lowie 1915: 7). The four participants were painted white for the ceremony and the ritual awakened the doll. The Sharp-horn medicine doll was approximately five inches in length and was adorned with greenish-blue beads, two rows to each arm "which represented the Morning Star" (Lowie 1915:15-16).

According to the Sharp-horn story, the first actual Sun Dance was initiated by a Crow named I a'kac (Lowie 1914: 14). In his vision, the lodge was painted with four black bands extending from top to bottom of the medicine lodge. I a'kac also saw the doll in the lodge (Lowie 1915: 14). When back in his own village I a'kac painted a design on his personal lodge. First, the entire top half of the lodge was painted black (Lowie 1915: 14). The design on the lower half of the lodge consisted of four black slashes which symbolized victory and revenge (Lowie 1915: 12). One slash was placed on either side of the door and the other two were placed in an
east-west fashion. A Mountain Crow folk tradition holds that a boy, *Andi'cic'opc*, discovered Sun Dance along with medicine doll in the area of Mount *I'Exyxorc* which was supposedly located in the general location of Yellowstone (Lowie 1915: 9-10). Here, the ritual word for Sun Dance, *Acki'ciru'a*, also referred to a "child's playhouse" which symbolized the sun's own lodge (Lowie 1915: 9). The *Andi'cic'opc* story also discussed the medicine doll. Here medicine doll traveled with seven men and one woman who appeared and disappeared at will (Lowie 1915: 13-14). The doll was colorful. Bear-From-Above's doll was described as a baby doll and was painted yellowish and red (Lowie 1915: 15). Only the head and shoulders were allowed exposure. The colors of yellow and red indicate the doll had a relationship with fertility and festivity. Medicine dolls which played an important role in the Crow Sun Dance had a relationship with the number four and seven:

The doll was tied up in a buckskin envelope. At the end of the first song the head of the doll suddenly popped out of its own accord. A second song was sung. The moon shook the doll at the boy, and stepped back. Then the doll came out of its cover far enough to expose its arms. At the end of the third song, it exposed its waist. After the fourth song, the woman stepped forward and then back again. The doll came out completely in the guise of a screech owl and sat down on the moon's hand. The boy (*And'icic'opc*) was at this time lying straight on his back. The screech owl flew about, and then perched on *And'icic'opc's* breast. Suddenly one of the men loaded and cocked a breechloader, then he
stepped toward the boy and sang a song. The woman said to the screech owl, "Now little screech-owl, this man is going to shoot you and you must make your medicine." It stood up on its feet and began to flap its wings. The man drew closer, and shot at the owl, which entered his breast and began to hoot inside. Andi'icc'opc looked toward the northeast. In the valley he saw a Sun Dance lodge. The seven men and moon got up, singing and beating their drums. They moved towards the lodge, making four stops on the way and singing a song each time. After the end of the fourth song, they entered the lodge. And'ici'opc looked through the lodge and saw the doll attached to a cedar tree on the north side of the lodge. At the foot of the tree he saw the whistler lying flat on his back. Seven men sang four songs again. Moon went to the whistler, and seized him by both hands. At each song she raised him slightly, then put him back to his former position, but the fourth time she pulled him up completely. They sang and danced facing the medicine doll. Thus the doll was discovered and whenever anyone wished to have a Sun Dance he requested the visionary to direct the ceremony. The doll represented the moon woman, and the lodge the sun's lodge (Lowie 1915: 14).

Conclusions

To summarize, the more than four color categories and various colors or aspects of colors such as blue, gray, and green held specific meaning for the Crow. Red often symbolized honor or virtue. Therefore red had correlations with rank. The honored wives of the Sun Dance feast were painted red and it was also a chief's color. Black symbolized strength and power. White had a specific correlation with initiation or supplication. Yellow was symbolic of abundance and festivity. White had correlations with tobacco magic. Blue and green, possibly aspects of
light and dark represented feasting and the god Morning Star. The Crow also had a set of sacred numbers which bestowed power and well being. These numbers included seven, four, ten, five, eight, two, and three. Seven had correlations with the Seven Dipper Stars and springs. Four held a relationship with creation and completion. Ten was symbolic of the Morning Star and was also used in counting and the grouping of gifts. The numbers five and eight had correlations with the magic of a successful hunt. Two was symbolic of opposing pairs in nature nature while three represented a time before completion. The Crow cosmology established a sacred design of cultural mores, spells, related ceremonies. Combinations of colors and numbers provided a means for ritual development and story generation. Both categories were used by medicine men. Crow utilization of color and number designs linked ceremonial rites involving revenge, courtship, and marriage with vision and the hunt. Furthermore, these sets of color and number categories were ranked with the color red and the number four being the most frequently utilized. Analysis of the early folklore materials show the color red as having a citation frequency of one hundred and fifty-four and the number four having a citation frequency of two hundred and forty-eight. The color categories of black and white or light and dark had
frequencies of one hundred and forty-seven and one hundred and forty-four respectively. This suggests a symbolic system of ordered, opposing pairs. Crow folklore with its dualistic traditions functioned to provide an educational structure which instructed the Crow in their traditions through an elaborate pattern of images woven together by color and number symbolism.
Chapter Five
The Symbolic Cosmology of the Pawnee

My grandchild, many years ago, before we lived upon this earth, Tirawa placed wonderful human beings upon the earth. We knew of them as the wonderful beings or the large people. These people lived where the Swimming Mound is in Kansas. The bones of the large people were found upon the sides of the hill of the Swimming Mound. The old people told us that at this place the rain poured down from the heavens, and the water came from the northwest upon the earth so that it became deep and killed these wonderful beings...The old people told us that the Morning Star said that when the time comes for the world to end the moon would turn red; if the moon should turn black a great chief was to die. From "How the World is to Come to an End" (Dorsey 1906: 134-135)

Introduction

The number and color symbolism of the Pawnee can be better understood if one becomes acquainted with a few elements of their history and language. The Pawnee migrated into Nebraska and Kansas territories, possibly prior to 1519, and settled along the Republican, Loup, and Platte Rivers. The Pawnee are speakers of Northern Caddoan. Pawnee is one of four languages of the Caddoans. The other three are the Kitsai, the Wichita, and Caddo. Pawnee is comprised of two dialects: South Band Pawnee (proper Pawnee) and Skiri Pawnee. South Band Pawnee was spoken by the Chaui, the Pitahawirata, and the Kitkahahki.
Pawnee culture possessed an elaborate folklore and ritual system. Their number and color cosmology functions to express not only the structure and rank of various societies and chiefdoms but also their universe. First, the early Pawnee believed the numbers four, eight, sixteen, thirteen, seven, and ten to be full of power and spirit. Four functioned as a very sacred number because it was the number of their four bands and the four world or leading bundles. Eight and sixteen also functioned as ritual power numbers because they had a correlation with four. Sixteen was considered the most perfect number.

Thirteen was a very significant Pawnee number. It functioned to organize the year and the Skidi band. First, the Pawnee year had thirteen months. Nine of the twelve regular months were named for routine village agriculture and hunting activities such as clearing, planting, hunting, and so forth (Weltfish 1965: 360). The tenth and eleventh months were named after the constellations big duck (kiwaks-kutsu) and little duck (kiwakski) (Weltfish 1965: 360). These two months were paired. The twelfth month darkness (kaata) was also paired with an additional thirteenth month known as the entrance or passageway (either Puhuweturukut or Kuhuwaturukat) (Weltfish 1965: 360). These terms refer to the ten to fifteen foot entrance way of an earth lodge. The cultural organization
of the Skidi band also involved the number thirteen. There were thirteen Skidi villages and thirteen sacred bundles. Thirteen also has correlations with both rain and thunder. Ch’haripiru or sacred bundle derives from chuhuru meaning rainstorm and ripiru meaning wrapped up. The number seven held a symbolic correlation with the Seven Dipper Stars and also the life of a tipi tripod which was from five to seven years (Weltfish 1965: 387). The number ten was also a sacred power number, ten was sacred to the Morning Star. It functioned in the organization of the ten bundle societies and therefore is representative of sacrifice.

Important spirit colors are white, yellow, red, and black. Each of these colors have Semi-Cardinal correlations. Each of the four colors spiritually aligned with four specific villages, the four seasons, the ages of man and woman, the elements, as well as plants and animals. The Pawnee universe was essentially structured and governed by this array of functional symbolic systems.

**Number Patterns**

Two (bitk), four (seidix), multiples of four such as eight (bittken), sixteen, and three (duit), six (sihuks), seven (skiks habits) ten (hi-huxsi-niweha), and thirteen (tau-widi-nax-sid) are fundamental to the Pawnee taxonomic structure. However the system functioned largely around four
and multiples of four. By way of explanation, the early Pawnee were divided into four bands: the Kit'kaha'xki, P'atahau'irata, Chaui', and the Skidi. The Kit'kaha'xki, the Chaui' lived in single villages while the P'atahau'irata had two villages, the Kawarakis and Pitahauirat.

The four posts of the lodge represented the four major Pawnee villages. The northwest post was symbolic of the yellow lion lightning star (feminine). The southeast post represented the red cloud wolf star (masculine). The southwest pillar represented the white wildcat winds star (feminine). The northeast post was symbolic of the big black masculine meteor thunder bear star. The four Semi-Cardinal directional posts, along with the Garden of the Evening Star and the home of Tirawa, formed a very powerful spiritual center for the Pawnee.

Each of the four colored pillars in the Pawnee sky lodge formed a unique cultural system or universe which necessarily functioned to educate the Pawnee. The four Semi-Cardinal directions, with their related categories, educated the Pawnee on the cycle of the seasons, animals, and village activity.

The bundles held relationship with the four colored poles or centers of the lodge. The Four Leading Bundles delegated sacred power to the tribe. The four bundles along with the four colors and four centers symbolized the Four Quarters of
the Earth and also represented the seasons. Running Scout said the following on the subject:

My grandfather said they were painted each in its own way. After the stars finished speaking, they said you must see how I am painted and you must paint the posts in the lodges as you see me. The posts must be yellow, red, black, and white. They represent the stars and their colors. The stars gave their names saying: I am ... but these names have been lost (Chamberlain 1982: 100).

Symbolism of the Pawnee Semi-Cardinal Cosmology
(Chamberlain 1982: 97) Table 5-1

<table>
<thead>
<tr>
<th>S.W.</th>
<th>N.W.</th>
<th>S.E.</th>
<th>N.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star</td>
<td>Star</td>
<td>Star</td>
<td>Star</td>
</tr>
<tr>
<td>White</td>
<td>Yellow</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>Winter-Age</td>
<td>Spring-Child</td>
<td>Summer</td>
<td>Autumn</td>
</tr>
<tr>
<td>Winds</td>
<td>Lightning</td>
<td>Clouds</td>
<td>Thunder</td>
</tr>
<tr>
<td>Wild-cat</td>
<td>Mountain</td>
<td>Wolf</td>
<td>Bear</td>
</tr>
<tr>
<td>Cottonwood</td>
<td>Willow</td>
<td>Box Elders</td>
<td>Elm</td>
</tr>
<tr>
<td>White corn</td>
<td>Yellow</td>
<td>Red Corn</td>
<td>Black Corn</td>
</tr>
<tr>
<td>Village and Bundle</td>
<td>Village and Bundle</td>
<td>Village and Bundle</td>
<td>Village and Bundle</td>
</tr>
</tbody>
</table>

The bundles functioned to socially and politically organize the Skidi. A village chief was considered a chief because he was the custodian of a bundle. However, there were two sets of magical bundles. One set included the Four Leading Bundles plus one ruling bundle (the Evening Star Bundle) and the other set included thirteen bundles. The Four Leading Bundles were not a part of the other set of thirteen bundles. However, one of the thirteen villages also held the
Four Leading Bundles. The most important bundle was the Evening Star Bundle (yellow-red or tawny calf) (Murie 1981: 34,52) (Murie 1914). It was held by the Tu-h-rikaku-h village. It delegated power to the Four World Quarter Star bundles (i.e. the Four Leading Bundles). These were held by the Kitkahapaku-htu village.

The names of the Four World Quarter Star Bundles were: 1) the Yellow tipi (akar’akata), or Yellow Star bundle, 2) the Mother-born-again (at’iratatariw’ata), or White Star bundle, 3) the Leading Cornstalk (ska’a-x-ha kit’awi), or Red Star bundle, and 4) the Big Black Meteoric Star bundle (riwiruchaku) (Murie 1914:551). The Four Leading Bundles did not belong to any one village; they administered to the tribe at large. Their function was to govern rituals and related social activities. Therefore, the priests of the Four Leading Bundles and the Tawny Calf Bundle (the Evening Star Bundle) were very important people in the tribe. These five priests were responsible for conducting ceremonies around the other thirteen bundles.

The function of the other thirteen bundles and their priests related specifically to the Skiri.³ The Skiri were originally comprised of thirteen villages. The foundation for political and social organization of the Skiri also was their

³The Skiri are also known as the Skidi.
unusual sacred bundle system. The powers of the bundles were located in the west, thought to be the home of rain and thunder. Each of the thirteen bands had a sacred bundle.

The plan for the thirteen bands and their respective bundles was as follows: 1) Tu-h-rikaku-h, center village: the Evening Star bundle, 2) Kitkahapaku-htu, old village: the four leading bundles are kept in this village, 3) Tu-h-hitspiat, stretching out in the bottom lands, 4) Tu-h-kitskita, village on branch of a river, 5) Tu-h-wahukasa, village stretching across a hill: the Morning Star bundle, which was finally divided into two, 6) Ar'iararikuchu, big antlered elk standing; 7) Arikarariki-h, small antlered elk standing; 8) Tu-h-huchaku, village in a ravine: the left hand bundle (all use left hands in the ceremony); 9) Tu-h-warakaku, village in thick timber; 10) Akapaxsawa, skull painted on tipi, 11) Skisa rikus, fish hawk, 12) Stixkautit, black ear of corn; 13) Turawi, part of a village (Murie 1914: 550). These bundles functioned to ritually organize the Skiri.

All of the bundles including the Four World Quarter Stars (i.e. four leading bundles) and their related societies held information on the origins of the tribe and also on the relationship of the villages to the constellations. It was said they came from the god Tirawa. Each bundle contained symbols of cosmic forces which represented the elemental
nature of the spirit to whom they were consecrated. (Chamberlain 1982: 22). Both the bundles and the villages functioned as Idealized Cognitive Models (Lakoff 1987: 74). That is, the villages, the bundles, along with related folk tales and ritual formed a ritual system whereby the population was educated in the cultural mores and traditions of their tribe. A village priest conducted rites around a bundle but was not the custodian. A woman could be the custodian of a bundle. Two specific examples of bundles are the Evening Star Bundle and the B.B.M. Star Bundle, which appears to be a meteorite bundle.

The number four and multiples of four were also important to Pawnee ritual. The lodge's circular shape echoed the circular rituals which were held within the confines of the dwelling. Ritual walks around the interior circumference of the lodge often took place in groups of four, eight, and sixteen. Other rituals also included multiples of four. For example, the ritual making of a pipe took eight days. Furthermore, four was a spirit which had a symbolic relationship with the four cardinal directions. This symbolic system is delineated as follows: North, South, East, and West. Also included are North Star, South Star, Morning Star, and Evening Star. Therefore, each of the cardinal directions held associations with other categories. Some of these categories
included allusions to light and warmth as well as the cold and snow. These allusions are representative of dualism which is a pervasive feature in Pawnee culture.

Table 5-2 The Symbolism of the Pawnee Cardinal Directions (Chamberlain 1982: 97)

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Star and Village</td>
<td>Morning Star and Village</td>
<td>South Star and Village</td>
<td>Evening Star and Village</td>
</tr>
<tr>
<td>Cold Snow</td>
<td>Light and Warmth</td>
<td>Cyclone</td>
<td>Garden of Life</td>
</tr>
<tr>
<td>Buffalo</td>
<td>Sunrise</td>
<td>Death</td>
<td>Sunset</td>
</tr>
<tr>
<td>Breath of Life</td>
<td>Male Power</td>
<td></td>
<td>Female Power</td>
</tr>
<tr>
<td></td>
<td>Dawn Wind</td>
<td></td>
<td>Conception</td>
</tr>
<tr>
<td></td>
<td>Creation Planned</td>
<td></td>
<td>Creation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Renewal</td>
</tr>
</tbody>
</table>

The number seven had correlations with the Pleiades or the seven brothers. In late autumn the seven stars appear in the east. Then, in late winter they are seen in the northwest where ten and even eleven stars are visible (Chamberlain 1982: 226). The appearance of the Pleiades or seven brothers told the priests to prepare for the Thunder Ritual which required the opening of the Evening Star Bundle. Seven was also important in the Great Doctor Ceremony. This ceremony had seven parts. Its program was as follows: 1) constructing the water serpent; 2) the construction of animal lodges; 3) building the turtle fireplace and the mud woman; 4) the cedar tree and lodge ceremony; 5) visiting the ill; 6) display of
doctors' power; 7) Returning objects o to the water (Murie 1981: 170).

Ten also functioned as a very important spirit number and assisted with the sacred power of the bundle system. The Pawnee created ten bundle societies which were concerned with bundle care and ritual: Horse Society, Society of Reds, Society of Brave Raven Lance, Black Heads, Society of Reds, Thunderbird Society, Those Coming Behind, Fighting Lance, Knife-Lance, and Wolf Society. These ten societies also possessed other important social functions: two functioned with hunting, six functioned with war, and two related to both (Murie 1914: 558). The lodge interior also had ten beds around its circumference.

The number three was sacred to Tirawa, the sky god and his home. A bison skull, located on a platform in the western section of the lodge, represented his home. It was painted red and yellow and bore a rectangular symbol decorated with three radials. The rectangle represented the garden while the three radials symbolized the sun. The skull was located near the altar area which was very important to the ritual life of the Pawnee. Above the altar area hung a bundle which when spread out became the garden of the Evening Star (Chamberlain 1982: 157). When the garden was not displayed, the symbolic bison skull, the earthly home of Tirawa, was shown. Tirawa,
the god of heaven was also represented in the construction of the lodge. The lodge’s domed roof represented the heavens and its long entrance was a sacred passageway to home. Women, children, and the elderly were placed near the door.

To summarize, the numbers three, four, thirteen, seven, eight, sixteen, and ten are powerful spirit numbers for the Pawnee. Tirawa’s number was three. However, the symbolic system of the Pawnee revealed a predilection for sets of four or multiples of four. Four and multiples of four functioned to organize their culture and ritual. The Morning Star symbol, which represented their warrior god was symbolized by a four pointed star. Further, the final corn planting, the Kurahu, occurred when the young plants had four good leaves (Weltfish 1965: 85). Four was thought to be the foundation of the universe. Many Pawnee rituals utilized a four by four system with eight and finally sixteen being the number of perfect completeness. Ritual walks around the circumference of the lodge were often done in sets of four. Thirteen symbolized the months of the year and the villages of the Skidi. The number seven had correlations with the Pleiades or the seven brothers. The Pawnee closely watched their movement through the heavens when in late autumn they appeared in the east and then in late winter were viewed in the northwest. The Seven Brothers told the priests when to prepare for the
Thunder Ritual. The number ten functioned to organize the Bundle Societies. These societies were important because they established rights and duties related to hunting and warfare. Related to this function was the transfer and delegation of bundles and bundle power. Bundle power could be sold three times without destruction of its spirit. However, if bundle power was sold a fourth time the spirit weakened.

**Color Patterns**

Analysis of early Pawnee color patterns is difficult. Very little information exists on Pawnee color terms. What information does exist is usually symbolically linked with ceremony and often with information on other tribes. According to James Murie, Alice Fletcher’s record of the Chaui version of the Calumet Ceremony contained some Wichita ritual elements. However, it is thought the following colors are possibly Pawnee: red (*pahati*), white (*taka*), green (*huree*), blue (light) (*kots*), yellow (*rakata*), and lack or dark (*katit*). First, all of the colors had symbolic relationships through both ritual and folklore. Colors were very important to Pawnee ritual cultivation practices. For example, the Pawnee considered sacred ten types of seed corn as well as their four related colors. The various seen corns were planted in adjacent hills in the fields. The planting hills symbolize the breasts of a woman. In the following table, some
of the seed corn names refer to color, while others do not. Mark Everts classified them as follows:

Table 5-3: Types of Native American Corn

(Weltfish 1965: 122)

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Corn</td>
<td>uraak-katit</td>
</tr>
<tr>
<td>Spotted</td>
<td>rikis-tipiku</td>
</tr>
<tr>
<td>White Corn corn</td>
<td>Rikistaka</td>
</tr>
<tr>
<td>White holy corn</td>
<td>rikis-peruksti</td>
</tr>
<tr>
<td>Yellow corn</td>
<td>rikis-takkata</td>
</tr>
<tr>
<td>Yellow corn</td>
<td>parus-arut</td>
</tr>
<tr>
<td>Red corn</td>
<td>rikis-pahat</td>
</tr>
<tr>
<td>Red-yellow corn</td>
<td>rikis-karus</td>
</tr>
<tr>
<td>Osage Corn</td>
<td>rikis-pasai</td>
</tr>
</tbody>
</table>

Red corn and other varieties were held to be very important. Yet, red held other symbolic correlations. For example, it had a relationship with the Morning Star and the New Fire Ceremony. According to Murie, red was the color of the Morning Star or Great Star. Morning Star red was viewed as a very important color sacred to the coals of the fire, the fire drill, and the flames of dawn (Chamberlain 1982: 57). Red pipe stone, Catlinite, was extensively used in smoking rituals. The powder from the Catlinite was also used for red pigment. Red spots on skins could indicate certain stars and the seat of Tirawa (Chamberlain 1982: 51). White and white dots related to planets and stars, such as White Star (Venus) and Two Ducks. White also held a symbolic correlation with white light or smoke after the Morning Star had passed
through (Chamberlain 1982: 57). White was an important color to spirit power of ritual stems such as ra-hak-takaru, which means "one-mouth-white" and possibly symbolized flight (Weltfish 1965: 392). Further, the color green possibly symbolized smoke. Pipe stones were often made of a soft green stone, chlorite, which was found near their permanent villages. Yellow symbolized the evening light. Murie's translations held in the American Museum of Natural History refer to evening light as the "place where the sun disappears" and related this to a particular shade of yellow (Chamberlain 1982: 48). Katit refers to black. It categorically links with dark, thunder, and the Big Black Meteor Star which was one of the Four World Quarter Stars. Black was an important ritual color for stems such as ra-hak-katitu which translates "one mouth black". This ritual stem also possibly symbolized flight. (Weltfish 1965: 392).

Folk tales such as "Cannibal Witch and the Boy" instruct the culture in the meaning and function of the color term black and its relationship with food. "Black" is seen as powerful as well as helpful. Here "black moccasins" have a relationship with the elderly and the obtaining of food:

the woman wore a black skirt and black moccasins ..the boy wore black moccasins and leggings..The boy had four arrows, and they were all black...The old woman often said: "Grandson, go and kill a man for me; I can not eat the kind of meat you eat, for it is very tough"...He said "The black arrows that
I have are all little blacksnakes, the bow is a large blacksnake, the bowstring is the backbone...
(Dorsey 1906: 72).

The color black, and particularly black moccasins, links with snakes and magical arrows.

According to Murie blue, was the color of the heavens and the god Tirawahat. "The blue flame rising from stones used in the sweat bath is said to be the breath of Tirawahat" (Murie 1981: 160, 162). Therefore, in the lodge the fire was considered to be the mouth of Tirawahat. The normal number of central lodge poles used in lodge construction was four. These were placed around the mouth of Tirawahat. Chief lodges usually had eight poles while the medicine man lodge had ten central poles. These poles were thought to support heaven.

Tirawahat made a circle of chiefs in the heavens...they speak of a circle of fire stars, in the center is one star...These are the stars that taught our people how to have the four pole ceremony...It was Tirawahat's ceremony---great ceremony for people to have upon the earth. We use to call it "stands inside lodge." They were four timbers--The poles were painted. This bundle's pole was painted black about the center. The other pole on the south side they painted red around the center..On the dark side north west the pole is painted yellow in the center.... On the south side were the sun sets the pole is white.....This is the number four, four leading bundles...Now brother, that was the reason Tirawahat dropped the earth to teach us different seasons: white pole-winter; yellow pole-spring; black pole-autumn and night; and the red pole-summer...(Chamberlain 1982: 195-196).
Three Pawnee rituals which make use of color and number symbolism are The Grand Opera, the Morning Star Sacrifice and the Hako. The Grand Opera was a twenty to thirty day ceremony which incorporated rituals from eight animal and plant cults. It had nothing to do with a well ordered universe; rather it was concerned with the mysteries of plant and animal life. It lauded nature and especially its hidden or underground characters. The eight animal and plant cults important to the Grand Opera formed an earth-spirit system which functioned as an Idealized Cognitive Model. The ritual structure is/was as follows:

<table>
<thead>
<tr>
<th>South Side</th>
<th>North Side</th>
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</thead>
<tbody>
<tr>
<td>Reindeer Cult</td>
<td>Eagle Cult</td>
</tr>
<tr>
<td>Black-tailed Deer Cult</td>
<td>Fish Hawk Cult</td>
</tr>
<tr>
<td>Buffalo Lodge Cult</td>
<td>Coyote Lodge Cult</td>
</tr>
<tr>
<td>Another Buffalo Lodge Cult</td>
<td>Bear Lodge Cult</td>
</tr>
</tbody>
</table>

(Weltfish 1965: 274)

The head doctor was a large, white beaver. Then, there was a garfish, an otter, and the fourth was a sand hill crane (Grinnell 1889: 108). The serpent was of special significance in the Grand Opera. During the twenty to thirty day ceremony a large serpent was constructed. The body was constructed of ash wood tied with sinew. The mouth filled with cottonwood teeth was large enough to house a man. A grass covering was placed over the body of the serpent which was then plastered with slip (Weltfish 1965: 274). Once the figure was smoothed
and shaped, it was painted with rainbow colors. This serpent was symbolic of good luck and origin: "They knew that his brother was a snake and would give him good luck" (Grinnell 1961: 73).

The number four was also very important to the Big Doctor Ceremony. During the course of the festival, trance-like states were induced through the utilization of the mescal bean which linked symbolic motions of the animal spirits to the participants of the various cults. Inducing a state of vision in order to communicate with animal spirits was of paramount importance. Communication with these spirits often took the form of sympathetic ceremonial motions or gestures which revolved around the number of four.

**The Morning Star Sacrifice and the Calumet Ceremony**

The Morning Star Sacrifice and the Calumet Ceremony are rites in which color and number patterns as well as celestial events play a vital role. The complex nature of the *Skiri* and *Chauki* number and color cosmology suggests a dualism where the opposing forces of Morning Star and Evening Star, life and death, seasons and directions became a complex cultural system. The star alignments used by the Pawnee makes the Morning Star Sacrifice a unique and complicated rite. "So far as we know, nothing like it (the scaffold sacrifice) exists among the other Plains tribes, nor anywhere else in the United
States and Canada, except possibly in Arizona and New Mexico; or in ancient Mexico where we find some curious parallels" (Wissler and Spinden 1916: 50).

The Morning Star scaffold was an unique object in the Plains Indian traditions-- only the Pawnee have been recorded as having constructed them. The scaffold was constructed with a special number and color symbolism: the four cross bars represented the four Semi-Cardinal directions. The first step was black (northeast), the second step was white (southwest), the third crossbar was yellow (northwest), and the fourth cross bar was red (southeast). The two uprights symbolized night and day (Linton 1926:458). The symbolism of the crossbars had a relationship with the symbolism of the four posts of the lodge.

Although history records similar scaffolds in Mexico, it is impossible to prove an absolute correlation with the Pawnee scaffolds. "Scaffolds of this kind are pictured in the Mexican codices" (Wissler and Spenden 1916: 50). Close variations of the Pawnee scaffold have been recorded in the Codex Telleriano-Remensis, the Manuscrit du Cacique, the Codex Nuttull, and the Codex Porfirio Diaz (Wissler and Spenden, 1916:49,52-54) (Weltfish 1965: 117). The Codex Porfirio Diaz recorded a sacrifice accredited to the Cuicatecans. The Codex Porfirio Diaz contains the following information on human
sacrifice: individuals were often placed upon a scaffold and put to death. In the illustration the scaffolding also had four crossbars. Above the scaffolding is a wheel which displays a cross or four pointed star motif similar to the Pawnee Morning Star. The Aztec figures of scaffolds and four pointed star motifs have correlations with Pawnee ritual and artistic design as seen in the bundles and parfleches. The link between the image of the scaffold-stars-number four (the four cross bars of the various scaffolds) and sacrifice suggests a correlation with the Pawnee. However, it is difficult to determine the origin of the scaffold.

The sacred color of Morning Star was red. The victim, usually a young boy or girl, was painted red on the right side and black on the left side. His or her shoes were also painted black. Black symbolized the night. Red symbolized the dawn. During the ceremony the Morning Star Bundle was opened and the contents utilized. The four priests of the four semi-cardinal directions officiated. During the course of the sacrifice the chest of the victim was opened, and/or shot with arrows. There was a close correlation between the semi-cardinal directions, the four priests, and the four chambered heart. The violent nature of the ceremony necessarily included verbal and physical blows which are considered dominant symbolic actions linking biological

Color and number symbols were also important in the Calumet Ceremony of the Skiri. The Skiri stated that the ceremony originated with them. In the Skiri Calumet ritual, the major symbol is a bird's nest. A mixture of the milk of green corn and blue paint was used to paint the corn. The color blue represented the sky (Murie 1981: 154). The Chaui' version of the Calumet Ceremony which Alice Fletcher described was as colorful as it was complex. It contained some Wichita ritual elements (Murie 1981: 154). The ceremony was composed of twenty rituals in two parts. The first part was the preparation. The second part was the rite. The first, fourth, sixteenth and eighteenth rituals were composed of three parts. The sixth, eleventh, fifteenth, nineteenth, and twentieth were comprised of two parts. The remaining rituals had only one set of ritual aspects. The Chaui version of the Calumet Ceremony also had a correlation with Chaka or the seven stars of the Pleiades (Fletcher 1904: 152). Chaka was a guide for travellers and young children. During the twelfth ritual of ceremony, Chaka appeared above the horizon. (Fletcher 1904: 152). As it appeared, the song everyone sang was stopped at the third stanza and another older song was incorporated. This introduced the fourth walk around the
lodge. The song was ancient and had been developed along with the ceremony (Fletcher 1904: 152).

There were several important ritual objects which were used in the *Chaui* ceremony. Two of these were the ritual stems *ra-hak-katitu* and *ra-hak-takaru*. They were made of ash and were a meter in length. *Ra-hak-katitu* was painted blue for the god *Tirawahut* "the circle of lesser powers" (Fletcher 1904: 20). A long groove running down the stem was painted with red clay paint symbolizing life (Fletcher 1904: 20). Attached to the stem was a spray of ten mature brown (golden) eagle feathers representing the mother. Red and white streamers were also attached and symbolized day and night and also the sun and the moon. *Ra-hak-takaru* was similarly constructed. However, it was painted green to symbolize the earth (Fletcher 1904:21). Attached was a spray of seven brown (golden) eagle feathers representing the father. Both stems had painting rituals. The blue stem's ritual included a song which had a set of stanzas. Each stanza was sung four times. An example of a stanza is as follows:

Take we now the blue paint
Touch with it the stem, putting on the sacred symbol,
Emblem of the clear sky
Where dwell the gods who descending bring us good gifts.
Gifts of life and plenty (Fletcher 1904: 228).
Here the color blue has a direct correspondence with gifts of the ancestors or gods as opposed to the gifts of the earth. The ritual around the green stem also had a musical script. It was composed of six musical phrases, and six ritual motions for the four Semi-Cardinal directions as well as above and below. The following translation is an example of a stanza:

Take we now the green paint
Touch it with the stem the mated stem
Putting on the emblem and living symbol
Mother Earth
From above descending bountiful blessing
on Thee
Mother Earth (Fletcher 1904: 289).

During the ceremony the colored stems were flown toward the child. The two colored stems form a symbolic dialectic indicating opposing forces and a desire for balance and the release of power. The ritual stems were flown toward and around the child. This was done to align the colors and related energy paths with that of the child. During the consecration of the child, the Kurahus touched the child with the blue paint held in a shell (Fletcher 1902: 233). Then, using the a red paint, the Kurahus traced over the lines of the blue design that were painted on the child's face (Fletcher 1902: 233). The paint was applied in four motions. The design, a red and blue arch running cheek to cheek attached to a vertical line running down the bridge of the
nose. The red and blue double arch with two vertical lines was then traced with water. Additionally a group of stars were also painted on the child's face. Once this was done the child's head was covered because his face held the image of the god. Then the members of the ceremony sing a sixth stanza: "'It is done—the face of Tirawahat is on the consecrated child'" (Fletcher 1902: 234). Thus the colors red and blue combined with water and formed a design which symbolized the face of the god. This ritualized art linked with ritual, dance and song patterns revolving around the number four.

Additionally the sixteen ritual walks or revolutions around the circumference of the lodge echoed the lodge's circular shape and gave the ceremony a symbolic correlation with perfection. When six ritual motions were utilized it symbolized "above and below" or heaven and earth. The powers of four and six provided a quantitative link which functioned to generate physical and spiritual power. Through such rituals color and number categories became agents for initiation.

The color and number patterns in the folklore traditions of the Pawnee supported their cultural design. According to tribesmen such as James Murie, the Pawnee recorded natural objects and events via an intricate network of folk tales and fables. These stories were thought either to be true, convey
a moral, or to contain a warning. Color and number categories were utilized to convey these messages. Many of the folk tales were sensitive to tribal origin, and celestial events, as well as the cycle of the seasons.

One example is "The Origin of the Chaui" in which the Chaui band defined their home via a parallelogram:

Four of the upright posts must form a parallelogram, with the longest sides extending east and west. The posts that are set in the group to uphold the lodge represent the four gods who hold up the heavens in the northeast, northwest, southwest, and southeast. There are minor gods between these, with powers that connect the power of one god to another (Dorsey 1906: 14).

According to Chaui lore, Tirawa, the god, instructed the Chaui to build the parallelogram and across the top place a net of yellow willows. The yellow net represented the ribs of the god (Dorsey 1906: 14). Yellow is the symbol for abundance and the many ribs of the buffalo were relished by the Pawnee.

Another important myth was the "Four Gods of the West," which related problems with finding food. According to the folktale, a man entered a lodge and was confronted by four men seated in the lodge's western section (Dorsey 1906: 20). They gave directions on how to hunt and eat buffalo meat. At first the man was afraid but he eventually managed to kill a buffalo and harvest the meat. This story was most significant because it addressed four and west (i.e. the four leading
bundles) as the source of direction and assistance in the successful completion of a task.

The folktale "Four Gods of the North" recounts the ritual objects and procedure for finding a companion. The four gods of the north were in charge of all buffalo and also the rain (i.e. fertility). Four white clam shells fastened to four plum sticks were used to represent the four gods of the north. The white clam shells symbolized the power of the north and the face of Tirawa (Dorsey 1906: 29). They were placed in the north part of the lodge. Then the man officiating in the ceremony would face north and put his two thumbnails together and point them to the north. This act functioned as a means of summoning the four gods (Dorsey 1906:28). He would do this until he saw the faces of the first two gods. Then he repeated the act until he saw the faces of the other two gods. As mentioned, the function of the ritual was to give assistance in finding a companion. Eight priests attended, one of whom was painted red (Dorsey 1906: 29). The red priest also had a string of blue beads with a clam shell attached to his ear. At the close of the ceremony the four plum sticks were thrown into the water. Here the number four (completion) forms a categorical link with the colors red, blue, and white and the successful quest for a companion. This is possibly due
to the presence of Tirawa, with his color blue, and Morning Star with his color red.

The folktale "The Meteorite People" recounts the significance of multicolored objects. Buffalo, an old Skiri medicine man, told the following story: A man, Knee-Prints-on-the-Banks of-the-Water (Pattokatawa), was killed by a meteor (Dorsey 1916: 61). This folktale has correlations with the rainbow.

The people tried to catch the meteors. The gods were sad and sent a second man who said another meteor would fall and it would be in charge of all of the other meteors and they would all fly away together. He further said the meteor would have many colors and be shaped like a turtle. According to the story, the people eventually found the turtle-shaped meteor. It was smooth, round, multicolored, had legs and incised eyes. They thought it was good for the health. The people carried it to a hill in the western part of Nebraska where they left it (Dorsey 1916: 61).

Conclusions

To summarize, numbers of significance in the Pawnee cosmology were: two, three, four, six, seven, eight, sixteen, ten, and thirteen. Two functioned in structuring the dual nature of the Pawnee universe. Elemental forces were viewed as being in pairs: light and dark, summer and winter, hot and cold, life and death and so forth. Two was also important in the delegation of authority from the two sets of magical bundles. Three signified the sky god Tirawa. Four symbolized the foundation of the universe: the Four World Quarter Stars,
the Four Leading Bundles, and the four original Pawnee bands. It also held a relationship with the four cardinal and semi-cardinal directions, and the four seasons. Therefore, four symbolized the completion of a cycle. Six had a relationship with war. Eight held a correlation with the directions and the making of pipes.\footnote{\textit{It took eight days to make a Pawnee pipe.}} Sixteen symbolized perfection. Seven represented the seven brothers and the Pleiades. Ten represented the ten bundles and their societies. Ten also held a relationship of correspondence to the ten couches placed around the circumference of the Pawnee lodge. The number thirteen was sacred to the Skidi because there were thirteen Skidi bands.

The ethnographies revealed four to be the most significant number. According to the ethnographies, four functions as the most dynamic operand. It had import and symbolic significance in ritual performances. Analysis of the Pawnee folktales revealed the following citation frequencies: two had one hundred and eighty four citations, four held one hundred and sixty seven citations, three had sixty six citations, five had seventeen citations, ten held fifteen citations, six had six citations, twenty held four citations, eight had two citations, and fifty had two citations. The slightly larger citation frequency found for two possibly has
to due with the several factors. One, the symbolic cosmology of the Pawnee is dualistic. It is structured around opposing forces of male and female, light and dark, and so forth. Additionally, the Pawnee sacred bundle system has two major sets or divisions of bundles. These sets of bundles delegate authority through two channels.

Four, with its slightly smaller frequency of citations functioned in relationship to the successful completions of laborious tasks such as war or hunting, and therefore, was symbolic of luck. It also must be remembered that many symbolic elements are not as mentioned as others. Correspondingly, eight has correlations with priestly activity while sixteen was considered the most perfect of numbers.

Color categories such as red, white, yellow, black, and the colors green and blue held special meanings for the Pawnee. Red symbolized the Red Star, summer, the southeast, clouds, the wolf, the box elders, red corn, and the Morning Star. Red was the symbolic of authority: the Evening Star bundle--the Superior bundle--was tawny, a dark reddish sorrel color. White represented the White Star, winter, the southeast, the winds, the wild cat, the cottonwoods, and white corn. White represented the light and the smoke of the Morning Star as it passed through the skies. Yellow signified the Yellow Star, spring, the northwest, lightning, the
Mountain Lion, the willow, and yellow corn. Yellow also symbolized a special kind of evening light while green held correlations with the smoke from pipes. Black was symbolic of the Black Star, autumn, the northeast, thunder, bear, the elms, black corn, and the Big Black Meteor. Black was also symbolic of power and danger. Blue symbolized the sky god Tirawa.

The color red was the pervasive color through the early ethnographies. This is possibly due to its relationship with authority, rank, and warfare. Through the folklore materials eighty citations were found for red. The categories of white and black were found as having one hundred and seventeen and one hundred and fifteen citations respectively. There were sixty-one citations for yellow, twenty-six for blue, three for green, and one for gray. Red's smaller citation count through the folk materials possibly further suggests its relationship to authority and rank. By way of explanation, the folk texts are older materials and possibly represent an earlier stage in Pawnee culture.

These numbers and colors along with the number thirteen functioned to structure the symbolic cosmology of the Pawnee. Villages, along with their kinship and ritual patterns, were organized in concordance with the tenets of the Pawnee
universe and expressed a relationship to art and culture through an elaborate sets of ritual and folklore patterns.
Chapter Six
The Symbolic Cosmology of the Kiowa

Introduction

Kiowa color and number patterns provide a guide to understanding their art and folklore. Color and number patterns structure the arts, rituals, and political societies. Spirit animals and sacred places such as Bear Lodge near Sun Dance, Wyoming also have influenced the folklore and art of the Kiowa. The Kiowa tribe’s language family is Kiowa-Tanoan. Kiowa-Tanoan has a correlation with the Uto-Aztecean language family. The Uto-Aztecean language family extends into Mexico.

In order to understand the symbolic nature of the Kiowa, it is first important to explore their historical situation. In 1732 the Kiowa made contact with the Spanish along the Platte River. Here, the Kiowa Apache joined the Kiowa and together they moved west into the Black Hills. The Kiowa made Devil’s Tower, also known as Bear Lodge, a sacred shrine. This black volcanic core is very important to the folklore of the Kiowa.

Trade is extremely important to Kiowa art and artists. The Kiowa traded with white traders, the Arapaho, the Commanche, and others. Mirrors, bread, and bacon were obtained from the white traders. Rituals and related objects such as the Sun Dance and the sacred Tia’me were acquired from
the Arapaho (via the Crow). Vermillion (red paints), women with tattoos, colored beads, blankets, and looking glasses were acquired from the Commanche (Mayhall 1962: 89). Looking glass may have had a correlation with reflection and blue sky stone or selenite. Selenite has been found near the ancient signal towers of the pueblo cultures of the American Southwest (Burton 1993).

The Kiowa tribe and the Kiowa Apache gathered a variety of foods. They included wild plums, strawberries, buffalo, antelope, birds, rabbits, and occasionally a white horse (Battey 1967:48; 38). Consumption of food was ritualized. Food was often prepared in three kettles and served with two spoons. The three kettles were passed in a circular motion.

**Number Patterns**

Numbers were important to the Kiowas; certain numbers were important in folk tales. They also gave definition to quantities of material goods either traded or raided for. Certain numbers became important symbols in rituals. These numbers have been recorded in accounts of early Kiowa life as well as in their folklore traditions. They are as follows: seven (p H’ou-dl), six (masa), four (y’H-gyH), eight (yht’-
sei), two (yi-h-kadl-the), and ten (ka'-'K'iH). Seven symbolized the Kiowa tribe. Six has a relationship with social rank. Four was the number of omens and dreams. Four also symbolizes rising and completion. The number eight had correlations with the stars. The numbers two and ten defined fables and stories of medicine. They also have a strong correlation with good fortune and survival. Ten is considered a high ranking warrior number. However, the number four was also important to Kiowa rank, ritual, and order, linking sacred ritual gestures with the four associates of the keeper of sacred Kiowa medicine doll, the Tai'me.

The number seven was the original number of the Kiowa band. Originally, the Kiowa had seven sub tribes: 1) the Kata "Biters," i.e. Arikara; 2) Kogu'i "Elk"; 3) Ga-igwu "Kiowa Proper;" 4) Kinep "Big Shields"; 5) Semat Thieves," i.e., Kiowa Apache; 6) Konta'lyui "black boys"; and 7) the K'uato "Pulling Up" (now extinct)(Mooney 1898: 229). Clark mentioned only 1) Kog'ui, 2) Ki'nep, 3) K'at'a, 4) Kontalyui (Mooney 1898: 229).

Therefore, the number seven and related folklore materials have a relationship with kinship, the natural

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5 Other numbers such as eleven, twelve, and thirteen appear in the Kiowa Sun Dance. These numbers reference the random number of fetishes.
elements, and sacred space. Seven also links to the seven stars of the Big Dipper and also to Tso-ai- Devil's Tower or Bear Lodge; as the folktale "Up the Mountain" attests:

Eight children were there at play, seven sisters and their brother. Suddenly the boy was struck dumb; he trembled and began to run upon his hands and feet. His fingers became claws, and his body was covered with fur. Directly there was a bear where the boy had been. The sisters were terrified; they ran, and the bear after them. They came to the stump of a great tree, and the tree spoke to them. It bade them climb upon it, and as they did so it began to rise into the air. The bear came to kill them, but they were just beyond its reason. It reared against the tree and scored the bark all around with its claws. The seven sisters were borne into the sky, and they became the stars of the Big Dipper (Momaday 1969: 8).

The image of the brother's metamorphosis is symbolically related to the sacred number seven and magical growth.

There are similar allusions to kinship in the folktale "Star Girl." In this case the number eight is significant. However, the stars are those of the constellation Pleiades. The story concerns a girl who lives on earth and who has one sister and six brothers: the Tamatoda or the Pleiades. In another variation there are only five brothers while the star farthest to the east is the girl. The seventh star is the sacred fire which lights their pipe (Parsons 1929: 9). Here seven symbolically links to fire and tobacco.
Images of the Seven Dipper Stars also link via Bear Lodge to the ten grandmothers and myths of origin:

We Kiowas first lived North of the great rock that rose out of the Plain, pushing up the boys. In that land was also a magic lake where the medicine man first saw the ten grandmother gods. We also lived in a country where hot water shot up out of the ground high in the air... We grew up in that hot-water country (Nye, 1962: vii).

The number six is very important to rank and warfare. A man who is free in Kiowa society could rise in rank by joining one of two major divisions of warrior societies: the T'o'kin'ahynp or "coldmen" (men of the northern countries), or the Gwa'halego (men of the southern countries) (Mishkin 1992: 227). Once included in the warrior societies men could also rise in rank either through deeds of valor or through the acquisition of property through raiding. Therefore, warrior societies were very important to Kiowa culture.

Most warriors belonged to a large subgroup called the Ya'pahe. The numbers four and ten were very important to the Ya'pahe. There were six major warrior sub-groups in the Ya'pahe. Warriors had to have four heroic deeds (usually through raids) to their credit before they could finally advance through the ranks of the Ya'pahe and into the Koits Enka (i.e. Ka'-'its'enko) a very exclusive warrior society (Mishkin 1992: 38). The social stratification of the Ya'pahe is as follows: 1) Pola.n.yup (tsa.'n.yui) "rabbits", 2)
Adalto. yui (ten.bey.u'i) "young wild sheep", 3) Tsenta.'nmo "Horse Head-dresses", 4) Tonko'ko "Blacklegs", 5) T'an.peko "Skunkberry People", and 6) the highest group the Ka'-its'enko "real or principle dogs" (Mooney 1898: 230) (Lowie 1916:42). There were only ten ka'-'k'ih, "real dogs." "Chief dogs" is Mr. Mooney's translation of Ka'-its'enko (Mooney 1898: 847). There was a special red sash that served as a symbol for the Ka'-its'enko which was about six inches wide which was called g'oitse'tota. It took four or five days to make (Mooney 1898: 848).

Four a very significant ritual number in Kiowa literature and society. Kiowa folklore traditions and related rituals are filled with references to its sacredness. First, it is important to understand the Kiowa tribe as having four classes: 'Cngop "first", the O'neigui'p'a "second", Kccn "the poor", and the Dap'om "helpless or criminal" (Mishkin 1992: 3). As mentioned, individuals who were free and not slaves could rise in rank through the completion of four heroic deeds or through raids. Rituals involving the number four along with spiritual vision functioned as a means of improving one's lot in life. Elaborate rituals and special names were often given to help children excel in life. One folktale, "Pit'dogede' Receives Her Name," recounts the naming of a child at a Sun Dance sweat lodge where four is ritually important:
Anso'ete approaches the entrance of the enclosure (the sweat lodge) four times, each time kneeling on both knees at the entrance. The others follow him. They enter and make the circuit (clockwise) of the hole in the ground....Anso'ete takes his bunch of sage, holds it in the steam, and applies it to his face and body. The others do likewise....there are four performances.....Anso'ete tells his daughter to bring in the baby. She and the baby are on one side of Anso'ete; her husband, on the other....He takes medicine from Tai'me, chews it, and spits it four times into the mouth of the baby....He takes the baby into his arms, names it. He names her Pit'dogede,"Standing-Inside-Feathers" (The reference is to the Tai'me who stands inside its wrapping of downy eagle feathers.) The baby, having a Tai'me name, would live well, as Tai'me lived and be strong. Two horses were given away on this occasion—to some old people (Parsons 1929: 125).

Here a baby is named and the number four is ritually used to provide protection for her. Additionally, a gift of two horses is provided to the elderly, possibly to insure that she may have a long life.

Another example of the sacredness of the number four can be seen in the rituals of the Peyote Society of the Kiowa. Peyote is thought to be an incarnation of a vegetable deity and is treated with great respect. For example, the peyote priest blows four times on his eagle-bone signaling people to come to his tent. There he places "father peyote" on the altar and prepares the traditional cigarette which was a mixture of tobacco and willow bark. Each celebrant puffs four times on the cigarette. Cedar incense is used as purification.
Before four peyote buttons—each four or five inches in length—were ritually eaten, a prayer was offered.

In more modern times, the importance of the number four is seen in four remaining Kiowa chronicles: 1) The Setta'n or yearly calendar (began with 1833 and covered sixty years), 2) the Anko or yearly calendar (began with 1864 and covered twenty-nine years), 3) the monthly calendar also called Anko which covered a period of thirty-seven months, and 4) the fourth calendar which was obtained from Chief Doha'san "Little Bluff" (Mooney 1898: 143).

The Anko monthly calendar has black pictographs that are in an interesting black spiral design. The Anko yearly calendar is rendered entirely in black. The summer pictographs are above, the winter pictographs are below. Anko is short for Ankopaa'ingyadete or "In the Middle of Many Tracks" (Mooney 1898: 145). Mooney defended the four chronicles as uniquely Kiowan.

Two is possibly the most culturally significant number in Kiowa culture because it has correlations with origin and gift giving. This symbolic linkage is further indicated in the origin myth of "The Udder-Angry Travelers-Off." Here the concept of tribal identity and origin also has a relationship with anger, aggression, and sharing (Harrington 1910: 119-123). This tale was collected from the texts of the late
Delos K. Lonewolf and his stepson Paul McKenzie, both of them were native speakers of Kiowa (Harrington 1947: 237). According to the tale, an argument arose between two Kiowa chiefs over the udder of an antelope, and as a consequence the tribe split into two factions. Here the tale of the two chiefs and their fight over the antelope udder describes problems with sharing and the subsequent migration of one segment of the original Kiowa tribe into the northwest, while the other migrated into the southern plains region.

Some folk tales have symbols which function in ordered pairs. For example, one sacred arrow myth is concerned with the seasons and fruitfulness. According to the tale, the Kiowa think of the wild-cherry tree and the plum-tree as symbolic of spring and autumn as well as fruitfulness and abundance. These woods are used along with the numbers two and four to make a set of four magical arrows which insure success and completion. As the story recounts, often a man would make two arrows of wild-cherry and another two of plum-tree wood to insure plenty (Curtis 1968: 226).

The sacred numbers of ten and two also function together as symbols of achieving the impossible, gifts, and good fortune. In the folktale "Split Boys," the only daughter of a Chief is killed by hanging with a sinew rope. Alone, her child went to live with Spider Woman where the child was cared
for. Spider Woman took some skin from her hip and made a hoop for the boy to play with. This ritual hoop split the boy into two boys. Spider Woman considered them wonderful because they had magical powers and could turn into birds or animals as required. An excerpt reads as follows:

They went back and told their grandmother that the dogwood was under a high bluff and the bluff fell over in order to kill them: one said, "What shall we do?" and the other answered," Let us turn into a feather." The feather flew up and the bluff did not kill them (Parsons 1929: 3).

The two wonderful boys also link with the buffalo:

They got a sharp stick. They turned into a mole and made a passage underground and got to the buffalo and started to gnaw its hide...The buffalo said "Someone has been gnawing me." Mole said, "My little ones are freezing. I want some of your fur." The Buffalo never moved. With his stick the Mole pierced his side. Buffalo started up, and followed Mole through his hole, until he fell down dead (Parsons 1929: 3).

In this tale two has a relationship with care and impossible achievements. A related myth where the numbers two and ten are important is that of the "Grandmother Gods (Tai-li-ope-kau) and Boy Medicine." The myth discusses a young girl who climbed a tree (probably a cottonwood) after a porcupine and reached the arch of heaven where she married the sun. One day she sought to escape the sun and return to earth via a sinew rope. Her husband saw her escape and killed her with a stone. The boy was cared for (again by Spider Woman) and one day was split into two half-boys via a gaming wheel.
After many adventures, one boy (Sun-boy) walked into a lake and disappeared forever under the waters. The other boy became Adalbeahya, a ritual medicine of ten portions (Nye 1962: 50).

The boy-medicine, placed in pouches, was cared for by ten priests. The medicine could not be viewed and had its own special tipi (Nye 1962: 50). Adalbeahya was considered the Eucharistic body of their supernatural hero-teacher Sun-boy (Nye 1962: 49).

It is also interesting to note the Kiowa were polygamous and sometimes had as many as ten wives which was considered symbolic of wealth, good fortune, and fertility. Ten also has connotations with survival as seen in the tales of the "Spider Old Woman Cycle. One tale is called "The Flood and Spider Old Woman." An excerpt reads as follows:

It rained for ten days and the water covered all the land. It killed all the people. There was a woman who had her da'kya the spider. After the water covered the land, she turned into a spider. She floated about until the water dried up. Then she became a woman again. After the water soaked in, soft, soggy places were left. Spider Old Woman (Konatasohi) could stay on top of them. So she is safe on water and land and in the air (Parsons 1929: 9).

In this folktale, the number ten holds symbolic relationships with spider magic, good fortune, water, and magical survival.

To summarize, the sacred number patterns in Kiowa folklore and culture involve images of war, power, vision,
and revenge. These categories link with rank, ritual and good fortune. The numbers seven, six, four, eight, two and ten were considered both ritually and mythically important. Seven was the number of original bands and the Big Dipper while six was the number of warrior societies and related ranking systems.

Four is possibly the most powerful number due to its symbolic correlation with ritual. Certainly four was the more ritually significant number through the early ethnographies. Four motions established sacred moments in time in the medicine lodge. Four was also considered crucial to the achievement of success, health, victory and was considered the ritual number for merit and deeds of valor. However, the citation frequency of four through the selected folklore texts is not as great as the number two. Two had a frequency of one hundred and fifty-five while the number four had a frequency of only one hundred and thirteen. This factor indicates the cultural significance of the Split Boy tales. It further suggests the cultural importance of origin tales such as "The Two Udder Angry Travellers Off." Eight has correlations with the Pleiades. Ten linked with chiefs, stars, split boy bundle medicine, the Spider woman Cycle, and the ten grandmothers. Ten also symbolized help and good luck. These sacred numbers assisted in educating the tribe on matters concerning origin,
vision, and survival. Further, sacred numbers provide a link with symbolic colors to animals and plants, as well as sacred sites such as Bear Lodge.

Color Patterns

According to John Harrington and Laurel Watkins, the color categories and colors of the Kiowa palette are red ($gu(a)dl$), black ($kou`-gyh$), white ($he:the$), blue-green ($sa$e), green ($a`-sei$), and yellow ($guat-kou$). Color symbolism is extremely important to Kiowa life. In the Kiowa cosmology, each color has a complicated set of related symbolic codes.

The color red has categorical links with a highly stratified military code and heroic death. The color black is very complex and links to many powerful nature spirits such as black wolves, black spiders, and black mud (Harrington 1928: 208). Blue is symbolic of messenger birds and flight. White often linked to vision power and vegetable deities. The colors green and yellow have correlations with fertility and water magic.

The Kiowa have a predilection for the color red. Red is closely aligned with cultural rank. One man, An-zah-te, had a friend who was called Red-Clay Paint Man who was always covered with red clay paint. Warriors were often highly painted (Lowie 1916: 851). Red is the color used for certain sashes of the ya`pahe. There are three types of sashes: six
of elkskin (dyed red), three of red cloth, and possibly one of black elkskin. These red and black sashes are used along with a sacred arrow to anchor the Ka'-its'enko to a specific spot. He had to "remain there until victory was one" (Lowie 1916: 35).

The ten Chief Dogs or the Ka'-its'enko were often completely painted with red. There were only ten of them. They were called the terrible ten (Wharton 1935: 35). Ceremonial red was used on the face, body, clothes, moccasins, and feathers. The leaders wore red dew claws and also carried red rattles (Wharton 1935: 848).

The badge or sash (the g'oi'tse'tota) of the Ka'-its'enko was often made of red cloth, rawhide or buckskin. The Kiowa Calendar History contains a pictograph that records the Ka'-its'enko headdress and red sash. The figure also has an order pendant and a shield with a black cross, probably a variation of the Morning Star. It is reminiscent of similar motifs recorded in early Aztec Codices. The figure in the Calendar is called Pan'ngya.gi'ale (or Sacrifice-man from pan'gya-"thrown away on the hills as a gift to the sun (Mooney 1898: 297).

In the folktale "Split Boys," they play a game with red arrows. It is called taaa. The playing elements in the game are a netted ring "like a spider web," and four arrows painted
red. In this case, red links with warrior activities and related games. Red also symbolized the eye of a tornado. Elsie Clews Parsons further suggested that the term for "cyclone" is tseaigul or red horse. Another term is mankagul, which has been translated as "wind red"—a woman's name (Parsons 1929: 16). Certainly the terms have a correlation with the red center of a described storm. Wild horses can be seen as powerful spirits which raise dark red clouds of dust. Such clouds are viewed as magical agents of transformation—now looking like one animal, then another. Red, along with black, links in Kiowa folklore with the character Sindi's horse, which is said to cause whirlwinds as well as tornados. Here is Iseeo's view:

Gradually the black cloud (along the Washita) dipped a leg down to earth. The center was red. Bolts of lightning shot down through the center setting the grass on fire. The leg began tearing through the timber along the Washita—uprooting trees flinging them through the air (Nye 1962: 156).

In this excerpt from a folktale, red and black are as having a relationship with the spirits in the clouds.

Red paint is used to decorate women and girls. The color red often has correlations with affection. Tope-kau-da painted her foster daughter's face red (Nye 1962: 138). Kiowa men often painted their wives' faces red to show their love (Parson 1929: 9). Young girls would have a round red spot painted on each cheek (Crawford 1915: 94). Analysis of burial
ceremonies also reveal the lips of the dead to be painted red (Crawford 1915: 64).

The color black is a very powerful nature spirit and is found linguistically linked to animal images such as black wolf or black spider. For this reason, it is considered symbolic of protection and power, and was often used in decorating shields. One folktale reads as follows:

When she came to the hill she looked back and saw a rainbow where she had been sleeping....In her dream the Buffalo had told her what to do...She saw them (the wolves) kill. She butchered some of the buffalo...She dried the hide, and cooked it on hot stones, which made the hide tough. She cut it in a round shape...She painted the shield black in the middle. She painted white around the black spot of the shield...it was painted like a man's eye, the white was the white of the eye, and the black the pupil (Parsons 1926: 17-18).

In the account the color black has a relationship with the wolf and fire.

Blue is symbolic of the sky and heavenly messages. Blue feathers are used to represent the "Messenger Bird" of the early morning hours (Mooney 1898: 107). Further, blue, green, and yellow have correlations with water shamanism. Some medicine men are water shamans and the symbolic meanings of paints often have correlations with sympathetic water magic. Clear, cold, blue water from certain springs is used for healing and cleansing. Quiet, warm, yellow and green pools were used for fertility and inducing vision.
For example, Docti (a Kiowa shaman) went into vision while bathing in a warm water pool. After eating the tubers of cattail rushes he went to sleep and later woke up in the green depth of the center of the pool (Nye 1962: 257). He was surrounded by "underwater medicine men: frogs, snakes, water dogs, and turtles" (Nye 1962: 257). The Sun-God ordered the water spirits to give Docti some medicine for sickness and some for success with women (Nye 1962: 257-258). This account links the colors of green and yellow to the power of the sun. The green and yellow colors of the warm water spirits further suggest warm water medicines having correlations with sleep, vision, fertility, and warmth.

Another example where the colors blue, green and yellow are important is in the magical rites of shaman Tone-a-koy. Tone-a-koy used a deep blue pool, now called Heyl's Hole for ritual curing. Tone-a-koy also made designs with green and yellow paint to communicate with nature spirits. In one case, Tone-a-koy painted his face, neck, and chest green and yellow. He said the colors were his shield against evil (Nye 1962: 265).

In another case, Tone-a-koy painted himself to look like a frog. Using splotches of yellow and green paint and wearing a frog mask, Tone-a-koy went into a vision-war against another man (Nye 1962: 274). Here the colors of green and yellow have
a distinct correlation with water and vision. The colors of his water-spirit function as a powerful sympathetic agent rendering protection. In this account, the color of deep blue has a relationship with curing while the colors of green and yellow symbolize power and fertility.

Correspondingly, yellow paint is also important to women: "A woman keeps some yellow ochre paint in a little buckskin bag. Every morning...she puts a pinch with water into her hand and rubs it over her face" (Parsons 1929:123). Also, "both men and women parted their hair with a little pointed stick and applied yellow pigment to the parting" (Parsons 1929: 123).

Further, the Kiowa tipi held symbolic meaning and is color coded. The tipi is quite colorful, coming in white, red, and yellow. They are often painted with sacred designs. Mooney stated that all of the tent colors had special meanings. A Kiowa chief known as Satanta whose name meant "White Bear" had a red tent indicating warrior rank and status.

The yellow tipi often has correlations with children and hence fertility. This can be seen in the folktale "Fire Boy and Water Boy." In the story two boys are playing with a magical hoop or wheel. Against their father’s wishes, they decided to roll the hoop north. The enchanted hoop rolls off
a bluff and is caught on the top of the tipi poles of a very large yellow tipi (Boatright 1949: 141). Inside the yellow tipi lives an ancient couple who tries to capture the boys. This story is a lesson or fable which carries a cultural message and functions to instruct children on the importance of discipline, danger, and the meaning of yellow.

White is spiritually significant in Kiowa folklore traditions. It has correlations with the ritual number four and with peyote. The white downy feathers of the eagle are sacred to the Peyote Society of the Kiowa (Mooney 1898: 107). These white feathers also have correlations with the Tai’me fetish with its feather wrappings. Illustrations represent the peyote button or seni disc as a "bright" center surrounded by white spots. Seni was thought to be a vegetable incarnation of a deity. The white downy eagle feathers link with the bright center and white dots of the ancient seni symbol. This pattern forms a symbolic structure or design which communicates the presence of spirit power and the importance of spiritual vision. Peyote was thought to have a "wonderful effect on the imagination" and to enhance religious vision (Mooney 1898: 239). Four Peyote buttons have been used in Kiowa ritual, and particularly in ghost dance rituals. Therefore, white has a relationship with revitalization, long life, and therefore health.
To summarize, the colors red, black, green, yellow, blue, and white are powerful symbols in Kiowa culture. Together they function to form an elaborate cultural code indicating military rank, hereditary priesthood, cultural patterns of affection, visionary practices, and spirit power. The Kiowa palette served as a vehicle for cultural and ritual organization as well as visionary expression. Red symbolizes the chiefs, valor, and military effort while the colors of white, blue, blue-green, and yellow have visionary, fertility, and spirit medicine correlations.

Analysis of the color frequencies through early Kiowa ethnographies indicate red is the dominant color. Red is more pervasive through the early accounts where it indicates a chief, warrior status, and related rank. Red body paint and red sashes were extensively used among the warriors. Red also is the color of a greater number of Kiowa warrior sashes, with black being also used for certain military sashes.

However, Kiowa folklore texts indicate red is not as pervasive a color. The total number of citations for the color red in the selected folklore texts is fifty-six. White, on the other hand, had a citation frequency of eighty-five. Although white is possibly the more pervasive color, being sacred to the Kiowa visionary and indicating the presence of a nature deity, red is the more dominant color. It functions
to organize the warrior bands and their leaders, who exercise power over the rest of the tribe. It is possible that the rank of the color and its warrior society orientation is the reason that it is less frequently cited through the folklore materials. The folklore materials are not as much concerned with military exploits as with education through magical stories and fables.

Sun Dance

The Kiowa Sun Dance ritual possesses an elaborate symbolic cosmology incorporating both colorful and numerically complicated ritual patterns into the culture of the Kiowa. The ritual colors of the body paints are of special significance and have correlations with revenge or war, power, nature spirits, and fertility. They are red, black, white, green, yellow, and blue. The sacred numbers appear to be two, four, seven, ten, eleven, twelve, sixteen, and possibly thirteen.\(^6\) The special symbol of the Sun Dance was the buffalo bull.

The Sun Dance also known as the Kado is a ritual initiated for revenge. The Kiowa Sun Dance medicine doll known as the Tai’me is a revenge fetish. According to legend, the Kiowa acquired the Sun Dance along with the Tai’me medicine doll from an Arapaho dancer who had pleased the Crow

\(^6\) The numbers eleven, twelve, and thirteen refer to the random number of fetishes that can appear in the ceremony.
shaman. Accordingly, the Tai’me keeper is usually part Arapaho (Mooney 1898: 241). Pictographs from the Kiowa Calendar History depict a cycle of Sun Dance Ceremonies. The images record significant events of many Kado. For example the Kado of the summer of 1843 was called "Antsen.kua’.a.dal-de K’do’, or "Nest-Building Sun Dance" (Mooney 1898: 288; fig.88). The image, originally in black, records the building of a nest on the ridge pole of the dance lodge. The Sun Dance of the summer of 1848 was called O’pan K’do' or the "Ka’-its’enko initiation Sun Dance. Held near Bent's Fort in Colorado, the ceremony "was distinguished by the initiation of several Ka’-its'enko who had their bodies painted with red paint and who also wore the o’pam-yai’po 'initiation rope' or ‘ceremonial sash.’ The sash was worn around the necks of a members of the Ka’itse’nko (Mooney 1898: 287). The last Sun Dance of the Kiowa prior to 1900 was held in 1887 (Clark 1994: 31).

The ritual lasts from four to eight days. There are four major dances which are initiated to bring success to the vision seeker. The Sun Dance or Kado is initiated via dream. The dream functions as a means of communication with the Kiowa community who starts preparation for the ceremony. The Kado usually was performed in May and signaled summer raiding. The raids extended into Kansas and Mexico (Robinson 1997: 42).
The recipient of the dream is almost always the keeper of the Tai’me. The complete Tai’me medicine consists of three decorated stone busts: one large woman and two smaller men. The goddess figure never left the base camp while the two male fetishes were often carried into battle (Mooney 1898: 241). The earlier versions of the fetish were made of buckskin and had a tobacco leaf head dress. Later versions of the fetish have been made of dark green stone and are similar to Pueblo fetishes. The Tai’me was about two feet tall. It is usually dressed in a garment of white feathers. The head dress is a single feather. Its face is completely obscured by a veil of hanging beads with blue beads entwining the neck of the fetish. It is painted with symbols of the sun and the moon. It is considered very powerful.

The Kiowa Sun Dance ceremony was structured with sixteen important elements: 1) searching for buffalo; 2) locating a ritual campsite; 3) the selection of two men to scout for a pole for the dance lodge (Spier 1921: 239); 4) the procession of women who cut down a tree for the lodge pole; 5) the mock battle for the pole; 6) the erection of the K’odu or Kiowa Sun Dance Lodge; 7) the four day fast for the keeper and the four associates; 8) the moving of the Tai’me to the Sun Dance lodge; 9) the transporting of the Tai’me fetish around the lodge four times for revenge (Mooney 1898: 243; Spier 1921: 
10) the four night dance while seven medicine men officiated (Spier 1921: 439); 11) the placing of the Tai'me on a stick or staff in the western part of the lodge; 12) the transporting of ten to thirteen or more other dolls into the lodge; 13) the placement of these fetishes, known as the taly'uka, was in front of the Tai'me, 14) the placement of a number of shields was behind the fetishes (Spier 1921: 439), 15) vowing to the Tai'me, 16) drinking a medicine root tea and offering meat to the sun at the close of the ceremony. The ceremony usually closed at 4:00 P.M. on the evening of the fourth day (Spier 1921:447).

The ritual paints of the ceremony were very important having correlations with magic, fertility, and revenge. The colors of paints and designs could vary. Both the keeper of the Tai'me and his four associates were painted for the Sun Dance ritual. A Kiowa Sun Dance recorded prior to 1930 recorded elaborate the use of elaborate paints and designs. The keeper was sometimes painted with yellow designs representing the sun and the moon. The use of yellow paint indicated a summoning of fertility spirits. His face was painted with black and red zigzag power lines turning downward from the eyes. The keeper wore a yellow buckskin kilt with a jackrabbit skin cap. (Spier 1921: 444). The four helper-associates' body paints also suggests a summoning of spiritual
and fertile agents or spirits. White and or yellow paints were used with sun images centered on each chest. The sun images were flanked with crescent moon images. The face of each associate had a green stripe across the forehead and down the sides of the cheeks to the corners of the mouth. Green also indicated the presence of a fertile nature spirit. These stripes met on the chin (Spier 1921: 445). The associates were also dressed in a yellow buckskin kilt. Scalps with two eagle feathers adorned each man's breast (Spier 1921: 445). The Tai'me shield bearers were painted yellow or green and also had images of the sun and moon painted on their bodies. The color of yellow has a correlation with the sun while green has a correlation with the moon. The zigzags and stripes possibly represent energy or water lines.

To summarize, the symbolic cosmology of the Kiowa Sun Dance made extensive use of certain colors and numbers. The colors of red, black, yellow, green, blue and white were ritually incorporated along with the number ritual numbers three, four, and sixteen into a symbolic design which used fertility magic for revenge. As mentioned the number of taly'uka could vary depending on who attended. There could be anywhere from ten to thirteen or more of these fetishes placed around the Tai'me.
The Sun Dance represented a vision quest initiated in response to a dream. It could be celebrated for revenge, or for other reasons such as disease. Elaborate Sun Dance lodges were constructed and recorded in the Kiowa Calendar. A ritual fetish and set of fetishes provided a ritual focus for a series of fasts and dances which ended with offerings to the sun.

Conclusions

To summarize, the Kiowa found many numbers significant. Important numbers, among others, in the Kiowa cosmology are two, four, six, seven, eight, and ten. Kiowa number analysis reveals a strong predilection for the number four in the ethnographies. Analysis of the early folklore materials revealed the following citation frequencies in reference to number categories: two had a citation frequency of one hundred and eighty citations, four held a citation frequency of one hundred and forty two citations, and ten had a citation frequency of one hundred and twenty four. Other numbers had the following citation frequencies: one held sixty two citations, three had fifty eight citations, five held twenty one citations, six had sixteen citations, seven held fourteen citations, twenty had ten citations, and sixteen had eight citations. The overt predilection for the number two in the early Kiowa folklore texts has a probable correlation with
pairs as seen in the folktale "Two Udder Travelers Angry Off" and the "Split Boy" tales. Even though, the number four had the second largest citation frequency through the related folklore materials, it still appears to be the dynamic symbolic operand being recorded in gestures through in the early ethnographies of the Sun Dance and other rituals.

These numbers often held symbolic linkages to other images which revealed their meaning. Two was symbolic of the "split boys." Four signified the presence of omens, dreams, vision, rising, and completion. Six was symbolic of rank and warfare because it held correlations with the six Kiowa warrior societies. Seven had a symbolic relationship with the seven sister stars of the Big Dipper. Seven was also closely associated with fire and the sacred pipe. Eight was the number that signified the stars of the Pleiades. Ten, a medicine number, held a symbolic relationship with the ten grandmothers as well as with "split boy" medicine which was divided into ten portions and placed in pouches.

The Kiowa also found the following color categories and colors very significant: red, black, white, yellow, as well as blue and green. Red was found to be pervasive in the Kiowa ethnographies. This is probably due to red's relationship with the status of chief and related authority, rank, and warfare. Analysis of color frequencies in related Kiowa
folklore materials revealed the following citation frequencies: white had a frequency citation of eighty five, red held a frequency citation of fifty eight, and black had a frequency citation of forty seven. Other color frequencies were as follows: yellow held a citation frequency of fourteen, blue had a citation frequency of nine, green was found to have a citation frequency of five, brown had a frequency of two, and gray had a frequency of one. Analysis of the Kiowa folklore materials indicates white held a somewhat larger greater citation frequency than red through the folklore materials. This factor possibly indicates a cultural predilection for visionary practices as seen in the rituals of the Peyote society. Red’s lower frequency through the folklore materials may indicate, as Boas mentioned, the presence of further hidden symbolic realities that are considered sacred and therefore not discussed.

Within the Kiowa culture, red symbolized authority and was often correlated with a warrior of rank. Black was symbolic of power. Often this power was seen as terrifying. As a color, it held a close relationship with earth spirits such as black wolves, black spiders, the Devil's Tower or Bear Lodge, and so forth. The color blue was symbolic of the sky and messages while white symbolized vision and the incarnation of vegetable deities. Finally the color category
of yellow and the color green were considered very magical and symbolized the presence of water spirits related to vision and fertility. Although red was the dominant color of the Kiowa Sun Dance, other color categories were represented such as dark or black, and pale or possibly white.
Chapter Seven

The Symbolic Cosmology of the Cheyenne Indians

Introduction

The purpose of this chapter is to discuss the symbolic cosmology of the Cheyenne. The Cheyenne possess an extensive symbolic cosmology filled with the lore of falling stars, animal kings, powerful shamans, underground lakes, and caves. Many of these folk tales contain beautiful number and color patterns. Numbers such as four, seven, thirteen, two, ten, forty-four, and magical colors such as red, black, blue, green, yellow, and white function to structure both Cheyenne culture and folklore.

The Cheyenne have extensive categories for number and color terms. Their elaborate number and color systems indicate a cultural predilection for industry and related social ranking. Further, sacred colors link to both women's trade societies, and warrior societies, as well as to related rituals such as the Yellow Corn Dance and the Sun Dance.

The colors utilized by women's societies vary in symbolic meaning depending upon the shade or hue of each specific color. The Cheyenne have over thirty colors recorded in a dictionary compiled by Rudolph Petter. However this study indicates there were four dominant color categories: red, yellow, black, and white. These color categories, also known
as the Urfarben, along with many other colors, were used in Cheyenne rituals.

Cheyenne cultural and ceremonial organization is very complex because symbolic elements which govern these systems have evolved or were borrowed by the tribe. Among them are the four sacred arrows, the council system, the tipi circle system, the shield system, and the Sun Dance (Mooney 1907a: 420). The two cultural hero folklore cycles that of Sweet Medicine (the Sacred Arrows) and Erect Horns (the Sun Dance and related military societies), function to provide cultural cohesion.

Before a discussion of Cheyenne number and color patterns can take place it is important to briefly understand something of their language, folklore, and history as discussed in both stories and in the early ethnographies. The Cheyenne tribe is one of seven Algonquian tribes: Cheyenne proper, Cheyenne ancient (the Suhtai), Ojibway, Blackfoot confederacy, Arapaho, Sauk, Foxes, and the Illinois. The Algonquian linguistic family is large, extending over the continent from Labrador and the Carolinas to the Rockies (Bushnell 1922: 8). Cheyenne territories include the areas of Montana, North Dakota, South Dakota, Wyoming, Nebraska, Colorado, Kansas, New Mexico, and Oklahoma.
Color and number terminology is very important to Cheyenne identity. Grinnell contended that the term Cheyenne derived from a Siouan term: *Sha hi-yen-Shah ela* (A Red Talker, or, A People of Alien Speech). However the people refer to themselves as two people: the *Tsistsista* or (Cheyenne proper) and *Suhtai*. Petter translates *Tsistsista* as “A Cut or Gashed People.” *Suhtai* remains untranslated. Also *Suhtai* may be the source for two major Cheyenne folklore themes, the Four Sacred Arrow Myths and the Erect Horns Cycle.

Colors and numbers also link to images such as water, stars, caves, and as plants and animals. These images are very important to the Cheyenne. According to legend, several hundred years prior to migrating onto the Plains and into Montana, the Cheyenne inhabited the western woodland areas around the Great Lakes. They arrived at their destination by traveling through a series of caves. When they finally surfaced they were in the land of the Great Lakes and rabbits (Grinnell 1962: 5). They found a sacred lake with a beaver king and lived among the rushes and gathering red grasses (Mooney 1907a: 374).

The Northern Cheyenne folklore traditions contend the Cheyenne lived in the region of the Great Lakes for many years in spite of a forest fire which was caused by a falling star (Grinnell 1962: 4). Eventually, they migrated to the Red River
area located between Minnesota and the Dakotas. When they crossed the Missouri, they met with the Suhtai. According to legend, it was here the two tribes joined forces making a larger Cheyenne tribe.

By the time Louis and Clark arrived in 1806, many Cheyenne earth lodge villages already lay in ruins (Grinnell 1962: 7-10). Lewis and Clark found the destruction of the Cheyenne earth lodges to be due to the aggression of the other tribes. Therefore, Louis and Clark learned very little about the symbolism of the Cheyenne earth lodge.

Trade was extremely important to Cheyenne cultural patterns. Peace Meetings were times of trade. The women belonged to trade societies known as the Moninieco. They exercised absolute control over trade and industry. Objects purchased included vermillion in powdered or clump form, combs, and colorful beads (Jablow 1994: 45). They had a pottery culture and also made figurines of pounded glass. (Mooney 1907a: 368).

Later, Cheyenne culture became centered around the bison and its derivative by-products. Colorful tipi forms, garments, and moccasins are examples of the bison culture. Trade occurred in skins and pelts. Other objects of exchange included ritual feathers and buffalo robes. Sacred corn was sold to white traders or traded for Catlineite, Catlineite
pipes, and other materials (Jablo\textsuperscript{w} 1994: 13). Important Cheyenne industries included decorative arts, such as quill and beaded designs for moccasins and dress patterns, as well as tipi construction and decoration. Many of the symbolic patterns created, such as the dragon-fly motif, formed elaborate cosmologies linking design with ritual (Grinnell 1962: 267). The Cheyenne tipi or skin lodge could vary in color, size, and design. The number of skins used by Cheyenne women to make a tipi was usually odd, with the number of lodge poles varying anywhere from eleven to twenty-one.

**Number Patterns**

The Cheyenne consider the numbers four (ne-va), two (nixa), forty-four, thirteen, seven (mo-sox-toa), and ten (ma-tox-toa) to be culturally important with four being the most dominant number, both culturally and ritually. It is the symbolic universe of the number four that is the most important to the Cheyenne and their culture.

The Cheyenne tribe was originally composed of four bands which represented the cardinal points: the Hevi\textsuperscript{a}si\textsuperscript{n} Pahis, Heuhaita'ng, Masi'kata, and the Omi'\textsuperscript{s}is (Mooney 1907: 405-407). The sacred design for the four original Cheyenne bands is a roundel with quadrant markings. This symbol is also a

\footnote{The Cheyenne sold more than one thousand bushels of corn to white traders.}
Cheyenne symbol for the Morning Star and the four cardinal points of the compass (Boas 1903: 490). The Cheyenne Morning Star was often blue and green (Grinnell 1926: 305).

The four bands are symbolized by four equidistant and equilateral triangles that form a cross within a circle when placed with their points toward the center. This circle and cross motif also functions as a primary design for one hundred sacred shields and is also seen in warrior facial paint (Mooney 1907; 412).

The sacred lodge of the Cheyenne also made extensive use of the number four. The ceiling and four walls represented the universe and the four directions. This place of initiation also had four sacred doors, four sacred windows, and four colors representing the four directions (Eliade 1959: 46). In order to better understand how the number four functions in their culture, it is important to know something about the mysterious folk hero Sweet-Root-Medicine. Four is also the sacred number of Sweet-Root-Medicine. According to the sacred arrow folktale, two or three thousand years ago a boy child, Mozeeoeve (Motsiyoif), or Sweet-Root-Medicine, was born. He was extremely intelligent. However, the people were afraid of him and drove him away. Eventually he made his way to a cave thought to be located in the Black Hills of the
Dakotas. In the cave he met others of his kind who were from all the great nations of the world.

The sage of the cave, Maiyun, instructed all of the students for a period four years. After Sweet Medicine was initiated he returned to the Cheyenne people and lived for four hundred years. He gave them the four sacred medicine arrows. These four arrows or Mahuts became one of the two great mysteries of the Cheyenne (Grinnell 1910: 542).

To further explain, Petter makes the following analogy: Sweet Medicine’s teaching and the four magical arrows are sacred nourishment which flows to the Cheyenne people (Petter 1915:59). The four arrows represent the union of the people, shaft symbolizing the four bands, with the feathers representing the spirit (Petter 1915: 59). Together the four sacred arrows symbolized the embodiment of the tribal soul (Hoebel 1960: 7).

The elements of dualism characteristic of the sacred arrows are seen in the observation that two of the sacred arrows control the actions of human beings while the other two control the behavior of animals. Each is approximately thirty-six inches long and has red painted eagle feathers covered with white down. Their tips are selenite (also called blue sky stone) and give off a shining, blinding light (Hoebel 1960: 10). Each of the shafts is adorned with blue symbols of
the sun, moon, and stars. Red symbolizes the earth while blue symbolizes the sky. They are taboo for women to see. The four arrows function as a symbolic foundation for almost all rituals and related patterns.

Also, the Cheyenne had a special priest known as the "Keeper of the Medicine Arrows." The Keeper cared for the arrows and makes appropriate sacrifices. Additionally, there were four assistant arrow-keepers. They functioned to ritually renew the arrows. The shafts often were made of willow and symbolic of two, hundreds, and a thousand (Dorsey 1905: 9). This predilection for the multitude linked with star and visionary practice.

Four and multiples of four (and also seven) are important to this ceremonial organization. Four also has a symbolic correlation with kinship. For example, each Cheyenne warrior society possesses the following elements: four maidens or sisters who help, four battle songs, four songs characteristic of each society, and four songs sung to the ancient sage Sweet-Root-Medicine (Great Medicine) (Mooney 1907a: 412-415).

The tribal council of forty-four chiefs was another Cheyenne cultural element which included four and its paradigm. This council originated circa 1750, through the effort of a Cheyenne woman, the daughter of a chief, who had been captured by O'wu'geo or the Assiniboines (Mooney 1907:
The appointed chiefs of the council of forty-four are known for wisdom, concern, and a good nature. Each chief had his special bundle. Carriers of the bundles had to rest in cycles of four stops. The council was also symbolized by a bundle of forty-four red painted sticks (Mooney 1907: 403). The forty-four red sticks were always kept with the four red sacred arrows with blue designs.

Thirteen is considered a very important number in the Cheyenne culture because it is the sacred number representing the Council of Stars. As the Cheyenne tribe evolved it came to mirror the Council of Stars and became thirteen distinct bands: the Aorta, Arrow Men, Ridge Men, Outlaw Band, Poor People, Suta-yo, Hive, Prominent Jaws, Ute Band, Cheyenne Sioux, Grass Hoppers, Eaters, and Young White Wolf (Dorsey 1915: Plate XIX). Mooney has translated the names for ten of the bands as follows: Herigs-hi pahis “aortas closed by burning,” Sutaio (unknown), Hevhaita’neo “fur robed men,” Oi’uiman “Hives,” Hisiomete’ neo “Ridge Men,” Wo’ tapia “Eaters”, Masikota “Corpse from Scaffold, or Ghost Head”, Ho’w’nowa “Poor”, Ogto gone “jawbone”, Omi’sis (unknown) (Mooney 1907: 405-407).

These thirteen bands formed a sacred camp circle which always opened to the east. Each band had a specific place in the circle. The order of each bands’ procession followed the
course of the sun from east to south to west to north and then to the place of beginning (Mooney 1907a: 403). Each band also represents a specific star in the Council of Stars.

The number seven in Cheyenne folklore has correlations with kinship: seven is symbolic of the seven brothers bearing gifts. Seven is also representative of the seven stars of the Big Dipper (Timber 1967: 19). The number seven has even further correlations with the seven assistant chiefs (seven brothers) of the various warrior societies.

The mystery folktale "A War Party of Seven" alludes to the mysteries of the number seven:

The turtle planned a war party, and sent word to some of his friends asking them to go with him. Those that went were the Grasshopper, the Water Snake, the Mouse, the Frog, the Skunk, the Diver, and the Rabbit—eight in all. They came to a big stream, and in crossing it the Grasshopper's leg stuck fast in the mud, and, in trying to get it free, he pulled off his leg and had to turn back, leaving seven in the party... After that all war parties of seven were thought to be unlucky (Grinnell 1926: 134).

A war party of seven is not as strong as one of eight, thirteen, or more members. The sacred numbers seven and four function as mnemonic codes related to warrior responsibility, vision, and magic. The numbers seven and four also function as an ordered pair linking culture to visionary warriors and warrior rituals like those of the Sun Dance. Correspondingly, there are five to seven warrior societies: the Red-Shield
Warriors, Hoof-Rattle Warriors, the Dog Men Warriors, the Coyote Warriors, and the Bow String Warriors. Each society is comprised of one hundred or more Cheyenne male warriors ranging in age from fifteen to forty years of age.

The numbers seven and four were also important to the creation of warrior shields. According to folklore traditions, the first shields came from a sacred space or center which defined origin. In Cheyenne tradition, this sacred space is a cave near Bear Butte located in the vicinity of the Black Hills of North Dakota. Inside the cave lived an old man who made shields for the men who fast on the surrounding hills.

The shields represented the shaman’s vision of the fasting man’s spirit. Although group shields are not often made, legend stated the old man cared for one young man and gave him seven sacred shields (Grinnell 1962: 201). These seven shields have correlations with the seven warrior societies and their respective chiefs. Each shield had its unique symbolism and were painted in a Cheyenne painting ceremony.

Four, the major ritual number, was important in the painting ceremony. Four small sticks were put in the ground making a small square. A coal was placed in the center and sweet grass burned. The shield was placed at the back of the lodge on a bed of white sage. A song was sung as the painter
paints. The participants smoked four times and sang a song four times. The magical painting was then completed (Grinnell 1962: 191).

The number two was very important because it had correlations with the Four Sacred Arrows and tribal origins. It was also important to understand that the number two, from the standpoint of the Cheyenne kinship system, which lacked the characteristics of dualism (i.e. moiety structure) often found in many cultures of the Americas during the sixteenth century (Levi-Strauss 1969: 71). Yet there were two sets of arrows in the Four Sacred Arrow bundle indicating possible influence of the dualistic nature of other tribes. However, two was important to Cheyenne infants and children. The first two fingers of a Cheyenne midwife’s hand are used to close the navel of a baby (Hilger 1946: 63). Then the ripe spores of the star puffball (Lycoperdaceae) are dusted on the navel of the baby (Hilger 1946: 63). The number two also had correlations with the berdache. The berdache often were very beautiful young boys and men who function with women and children. They assisted women with the heavy work of the household and village. The Cheyenne term for such children is hee-maneh (Jacobs 1997: 198). The berdache functioned where they are needed. The term for the berdache and the hee-maneh is “Two Spirited.” Their symbol is the dragon-fly. The
dragon-fly is a manifold symbol which also represents the whirlwind: the bridge between male and female polarities (Jacobs 1997: 125).

The number two was also important in the “Two Miracle” tales. In one folktale, the magic hoop was rolled four times and transforms into a wonderful golden buffalo calf which can be safely killed via a magic arrow, providing food for all. In this story, two functioned with images of extra food and supernatural help. The number ten and multiples of ten are also important. They are expressive of duration and child rearing. The Cheyenne believed children should be spaced ten years apart.

To summarize, the numbers four, seven, two, and ten were symbolically important to both Cheyenne culture and ritual. An analysis of related texts revealed the total occurrence of the numbers four and fourth is twenty-one while the total occurrence for two and second is twenty-four. The frequencies are close. Since two and four functioned as ordered pairs as seen in the structure of the four sacred arrows and related folk tales, the frequencies are combined making the number of citations forty-five. The accounts of Grinnell and others indicated the ritual patterns of ceremonies such as the painting ceremony extensively utilize the sacred number four
both in the ritual painting of warrior shields and in the establishment of the sacred place of painting.

Four was a unique fundamental symbolic universe which was culturally important because it structurally linked with the four original bands as well as to the symbolism of the sacred lodge and the Morning Star. Four was important to the ritual organization of the warrior societies which have four sisters, four warrior songs, and four warrior society songs. The number seven had correlations with seven brothers bearing gifts and the seven stars of the Big Dipper. The number two also functioned with ten and has symbolic import in relationship to childbirth, child care, and family planning.

**Color Patterns**

The dominant color symbols in Cheyenne culture are red *zemaevotto*, black *zemoxtavoetto*, white *zevcxpoetto*, golden-yellow *zeoseveovxtav*, and possibly green *zeoxzevoetto*. Red is the most dominant color. However, all colors function as a mnemonic code indicating tribal responsibilities, the seasons, and the times of day. Colors also frequently symbolize specific societies, and rank affiliations.

Rudolphe Petter, an early Mennonite missionary, recorded the symbolic meaning of certain Cheyenne colors. His found that red symbolizes fire, blood, heat, life, summer, and the heart. Black represents inertia, the dead, cold, night, and

Grinnell in ethnographic research on the color symbolism of Cheyenne women's societies concluded that any subtle change in color shade altered the meaning. Important colors to Cheyenne women and their industries were: red, white, light blue, green, yellow, and black. Red was representative of home, warmth, food, and blood. White symbolized activity and life. Light blue represented quietness, peace and serenity. Green symbolized growing life. Yellow had correlations with plenty, ripeness, and perfection. Black was symbolic of the glow of coals and the power over men (Grinnell 1910: 543).

Cheyenne quill work is beautiful, incorporating slender black roots and grasses. Dyes of various colors are used along with bright red cloth purchased from the traders. A white clay keeps soil off of the quills. Burned gypsum is also used by Cheyenne women to protect the quills (Grinnell 1962: 164). Two favorite symbols used in women's industry are the concentric circle and the many-pointed star (Grinnell 1962: 167).
Cheyenne warrior societies also had their special colors: red, yellow, black, and green. Warrior Societies used color as a means of communication. The societies painted their shields, faces, and bodies. They also painted related ritual objects such as the lodge poles, pins, hoops and rattles (Grinnell 1962: 262; 56). The Red Shield Warriors had as an emblem a red shield. The warriors’ bodies were also painted red. The society used a horned red head dress. Yellow was used by the Coyote Warriors to paint their face, upper arms, and legs. Black was used to paint the lower arms and legs. The Dog Men Warriors were also painted red. They used four black and white skunk skins along with a red snake rattle. The Owl-Man’s and Bow-String Warriors painted their bodies yellow and their extremities were painted red. The warriors, bows, and buffalo robes were painted red in the Inverted or Bow-String Societies. The Wolf Warriors were yellow painted bodies with their extremities painted red (Dorsey 1905: 17-26).

Symbolic color was very important to festive ceremonies such as the Northern Cheyenne Corn Ceremony. The major participants in the Corn Dance were four young women. The four women were dancers. They wore yellow face paint which was enclosed by a red circle. Red bands encircled the wrists (Anderson 1932: 58). Yellow facial paint represented
perfection, ripeness, and plenty. Red circles were painted on the cheeks of young women and girls who attended the ceremony (Anderson 1932: 58). Each of the corn maidens had to carry a distinguishing article: a cob of corn, a gourd rattle, a bear robe worn over the shoulders, or a stuffed prairie dog skin. The corn maidens led the unmarried girls and women in a ceremonial corn dance. The significance of the dance resided in its relationship with ritual healing.

Red and black are important in Cheyenne folklore. In the folktale "The Power of Stands in the Timber" the sacred colors red and black are portrayed as having a relationship with opening, vision, and the magic of success:

In the lodge were two young men, painted, and sitting one on each side of the door. The man to the south side of the door was painted with a wide black stripe all around his face—across his forehead and passing down outside his eyes, over his cheeks, meeting under his mouth. The one to the north of the door was painted red, in the same manner the other one was painted black...Then he spoke to the young man painted in black..."Do you go up to the hill...and stay until morning comes"...to the man painted red he said "you stay until daylight, and when daylight comes, see if there are any buffalo..." The next morning the red-painted man went up the hill to look for buffalo, and looked off away from camp, the whole land was full of buffalo...hundreds...He called to the camp...They all rushed out and killed many and brought them into camp and ate and were filled (Grinnell 1926: 173-174).

In the folktale "Where the Mice Danced," white has symbolic correlations life and festivity:
Wihio begging them to let him come in but they would not consent. Then he made up his mind that he would go in anyhow. It looked nice in there. A white lodge was standing there, food was being cooked, and preparations were being made for a great feast (Grinnell 1926: 291).

To summarize, color categories and colors important to the early Cheyenne were red, black, white, yellow, and probably blue, and green. Research through both the ethnographies and selected folklore texts indicates red was the more dominant ritual color. Analysis of frequently cited colors recorded in certain selected early folklore texts revealed total of thirty-two cited references for red. White ranks second with eight being the total number of citations. Black came next with a total of seven citations.

Analysis of the early ethnographies and folklore texts as well as dictionaries also indicated the following: the early Cheyenne had a very elaborate lexicon of color terminologies which were related to hue, and therefore probably to women's societies, symbolism, and industry. On the other hand, the color categories red, black, yellow, and white are dominant and have a greater correspondence to early rituals and related folklore texts. This may have to do with an established or borrowed archaic ritual pattern which required a more conservative palette based on an earlier availability of materials.
Sun Dance

The symbolic cosmology of the Cheyenne Sun Dance is devoted a warrior’s vision quest. The sacred ritual numbers were four, seven, eight, nine, six, and sixteen. Since the ritual was devoted to personal vision there were many colors of paint utilized through the ceremony. Some of the ritual colors are red, blue, green, and black. Among the northern Cheyenne, young boys would fast for vision and then would follow the fast with a plunge in icy water. In keeping with this tradition, the Sun Dance ritual incorporated the tradition of fasting. Four is considered an important ritual number. Participants fasted for four days and nights during the ritual. To the Sun Dance visionary the sun was the central point of meditation.

The Sun Dance with its elaborate number and color system formed a complex ritual design for personal renewal. It was thought the Suhtai brought the first Sun Dance to the Cheyenne when the two tribes merged (Grinnell 1910: 542). Legend stated the Sun Dance was first introduced by Erect Horns who traveled with the beautiful wife of a Cheyenne chief to the sacred mountain of Maiyun to receive instruction from the Thunder Spirit (Hoebel 1960: 12). The Great Spirit gave him a sacred hat and told Erect Horns the following: “follow my instructions accurately, and then, when you go forth from this
mountain, all of the heavenly bodies will move" (Dorsey 1905: 48).

The central theme of the Erect Horns cycle and the related Sun Dance ritual was world renewal. The major symbol of the Erect Horns cycle was the Buffalo Hat (Is’isi won) (Grinnell 1910: 563). The hat was thought to have supernatural powers and to balance male and female energy. It was covered with large blue beads (Grinnell 1910: 562). It functioned to renew the sacred arrows. The Sun Dance lodge, the oxheheom, functioned to renew members of the Cheyenne community. Oxheheom means "New Life Lodge."

The sacred power numbers of the Cheyenne Sun Dance were four, seven, eight (i.e. four x two), five, six, nine, and sixteen (i.e. four x four). The duration of the early Sun Dance was approximately eight days: four preliminary days and four days devoted to fasting and the ceremony. The number four, the symbol for completion, was used in a variety of ways: marking days, telling time, and also in the number of ritual gestures performed to achieve completion, whether in ritual painting, smoking, or singing.

These ritualized gestures, steps or pauses were applied to the process of dancing and whistle blowing. Therefore, there were four sacred pipes, four dances, sixteen songs, and sixteen individual dances (Grinnell 1962: 219). Additionally,
during the dance sequences sacred whistles were blown by painted participants. The whistles were sounded in groups of seven, eight, nine, five, and six blasts (Grinnell 1962: 253-254).

The colors red, black, yellow, white, and green were the symbolic colors of the Cheyenne medicine lodge. Like many sacred centers, the lodge had correlations with magical hills and a sacred cave. This cave located in the Black Hills of South Dakota was and is a sacred space for the Cheyenne. It is thought the Sun Dance lodge symbolizes this space. The early Cheyenne applied colors to the lodge pins, rafters, hoops, the bison skull, to dry sand paintings, and pipes.

In the Medicine Lodge each color had a directional meaning. For example, the pins to the south were painted red on the peeled part and black on the portion that is not peeled (Grinnell 1962: 262). The pins to the north are painted white. The trees to the north were also painted white. The rafters behind the sacred skull were painted red and black. The eastern and southern ones were red, while the western and northern ones were black (Grinnell 1962: 246). The red, black, and white paints for the rafters are held in paint bundles.

The skull was also painted with two sacks of paint. One sack was filled with red paint and one sack was filled with
black paint. A black line was sketched between the horns of the skull. This line extended down the median line to the end of the skull’s nasal bones. Then, red paint was applied to the middle of the face next to the black line and extended to the whole right side of the skull (Grinnell 1962: 237). Next, a green crescent moon was placed under the left orbit while a red circular sun was placed under the right orbit (Grinnell 1962: 237).

Four ritual hoops, symbolizing four rainbows, were painted in the following order: the lowest ring was red, above the red was black, then above that was yellow, and the top hoop or ring was painted white (Grinnell 1962: 262). The sand paintings also used the four colors. Furrows were made in the sand and the four colors of paints were sprinkled into the furrows. Black was spread east and west in the first south furrow. Red paint was sprinkled in the second furrow. Yellow paint was applied to the third furrow. White paint was placed in the northernmost of the furrows. Dots of each of the colors were placed by the respective furrows (Grinnell 1962: 261). Red was the sacred color of smoke. Red was used to paint all the sacred pipes (Grinnell 1962: 273). A red stone pipe held in the Box Elder bundles known for supplying red paint was also present and placed with the altar south of the buffalo skull (Grinnell 1962: 272).
The standard body paint, with or without designs, often was red with both men and women wearing it during the festival. Here red is symbolic of life and warmth. However, white which is symbolic of festivity and vision, black symbolic of power and yellow symbolic of ripeness or plenty were also often worn:

There was much variety in the fashion of the dancers’ painting. Yellow was a common ground color, often with grasshoppers on the forearms and upper arms, and on each side of the front and back of the body. The sun was painted on the chest and a crescent moon on the left shoulder blade. The dancers so painted wore springs of sage in the belt. (Also) Pink, black, or white were sometimes a ground color (Grinnell 1962: 264).

However, other colors and designs are also used. Body paints and designs can be quite elaborate, involving symbols for the sun, moon, and Morning Star depending on personal dreams or visions. Many of the decorative body paints vary day to day with the dancers, the pledger, and his wife. Also, the dark greens and blacks of the cyclone paint complex have a correspondence with the dragonfly patterns which linked to the image of the whirlwind. Men painted black with blue dragonflies wore sage wreaths, wristlets, and anklets, and had orange-colored eagle down-feathers tied to the back of the sage wreaths (Grinnell 1962: 271). The dragonfly or whirlwind pattern and paints function as a link with the berdache. The berdache or "Two Spirited" children assist the women with the
sacred central lodge pole of the medicine lodge and also with other elements of its construction.

To summarize, the Sun Dance ritual incorporated many numbers and colors into its symbolic system. The numbers of four, seven, eight, nine, five, six, and sixteen are considered very significant, as are the many colors and hues of red, yellow, black, white, green, melon, blue, and brown. These numbers and colors appeared to be the most ritually significant because of their frequency of use. However, even though numbers such as seven, eight, five, six, and sixteen were important and ritually aligned with whistle blowing and dances, four was still significant and appears to be dominant. Certainly four was pervasive through the Sun Dance, frequently referring to the number of days and nights of fasting, the number of pipes, and the number of songs, dances, and dance steps.

The colors red, yellow, black, and white are important in the ritual decoration of the Sun Dance Lodge. However, red is applied to all sacred pipes. Red is also the pervasive color of body paint among some of the warriors and ritually worn by many wives of warriors. These women also have their clothes painted entirely red with red paint. Therefore red, symbolic of life, warmth, and home, links with the concept of renewal
and appears to be the more ritually significant color at the Sun Dance.

Conclusions

To summarize, numbers of significance in the Cheyenne cosmology were among others: two, four, seven, ten, thirteen, and forty four. Four was indicative of the four directions of the universe and the four original Cheyenne bands. Four also held a symbolic relationship with the Four Sacred Arrows. The Four Sacred Arrows represented the complete union of the Cheyenne people with the great spirit. Therefore, four was symbolic of life, divinity as well as divine will.

Two also held a close correlation with the Four Sacred Arrows. Two of the arrows were thought to control the behavior of all animals while the other two arrows controlled the actions of mankind. Therefore, two was not only symbolic of life, it was symbolic of power. Another example is the first two fingers of a midwife's hand which were used to close babies' navels.

Seven symbolized the "Seven Brothers Bearing Gifts" who were also the "Seven Stars of the Big Dipper". Seven also held a relationship of correspondence with the seven warrior societies. Ten held symbolic significance to family planning. Cheyenne culture required a space of ten years between each

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\[8 These arrows were forbidden for women to see.\]
child. The concept of tribal council was also important to the Cheyenne. Two numbers which held correlations with the concept of council were the number thirteen which had a relationship with the stellar configuration known as the "Council of Stars" and the number of Cheyenne bands. Another number which held a symbolic relationship to the concept of council was the number forty-four. It's symbol was forty-four red sticks. Each one of the sticks was the responsibility of a chief.

The ethnographies indicated the number four to be the most ritually significant number. Research of the early folklore materials revealed the following citation frequencies: two had a citation frequency of twenty four, and four held a citation frequency of twenty one. Other citation frequencies include: ten and forty with a citation frequency of one. The close correlation of the numbers two and four suggests the existence of paired opposites. These two numbers have a parallel correlation in the two major ritual elements which structure Cheyenne society: the four sacred arrows which were divided into two sets of arrows representing the union of the Cheyenne people with nature and the great spirit, and the Erect Horns Sacred Buffalo Hat which functioned to balance pairs.
The following color categories, among others, were of symbolic import to the Cheyenne: red, black, white, yellow, and blue. Red symbolized fire, blood, the heart, heat, life, and south. Black represented inertia, night, cold, death and north. White held a symbolic correspondence with life, light, morning, spring, and east. Golden yellow represented life, growing, youth, happiness, and west.

Analysis of the Cheyenne ethnographies and the folklore materials indicated red to be the pervasive symbolic color category. Early folklore texts revealed the following citation frequencies: red had a citation frequency of thirty-two, black held a citation frequency of nine, and white had a citation frequency of eight, yellow had a frequency of four, and blue had a frequency of one. The category red has a symbolic correlation with a cultural predilection for home, warmth, fire, life, and the heart. Therefore, red is considered symbolic of these cultural elements.
Comparison of color and number categories in the symbolic cosmologies of the Crow, Pawnee, Kiowa, and Cheyenne reveals similarities as well as differences in certain cultural and ritual patterns. Analyses of the early ethnographies of all four tribes indicate a predilection for the color red and the number four. However, a review of selected folklore materials indicates a variation from this pattern (e.g. Table 8-1).

Table 8-1: Comparison of Color Frequencies (see Appendices)

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Analysis of the folklore materials reveals a very interesting variation to the recorded cultural pattern involving four. Four is often paired with the number two in many folktales. This indicates four and two have possibly a ritual definition. The pattern suggests a dualistic pattern which affects both art and culture. Paired opposites symbolize the universe.
Table 8-2: Comparison of Number Frequencies (Appendices)

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<td>twenty-two: 3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>thirty-nine:</td>
<td>1</td>
<td>eighty: 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>forty:</td>
<td>1</td>
<td>fifteen: 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sixty:</td>
<td>1</td>
<td>sixty: 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sixty-seven:</td>
<td>1</td>
<td>fourteen: 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>seventy-six:</td>
<td>1</td>
<td>twelve: 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>thirteen: 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>twentyfive: 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>forty: 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>seventy: 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As the color table indicates, the colors red, white, black, and yellow account for more than 90% of all color references (e.g. Table 8-3).  

<table>
<thead>
<tr>
<th>Tribe</th>
<th>Red/Yellow Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow</td>
<td>553/609</td>
<td>91%</td>
</tr>
<tr>
<td>Pawnee</td>
<td>373/403</td>
<td>93%</td>
</tr>
<tr>
<td>Kiowa</td>
<td>204/221</td>
<td>92%</td>
</tr>
<tr>
<td>Cheyenne</td>
<td>53/54</td>
<td>98%</td>
</tr>
</tbody>
</table>

This pattern suggests that other colors might be the products of problems either with translations or interpretations.

According to the Berlin and Kay model and its predictions (see Chapter Two), green would be the next most common color since all four tribes definitely have at least four color terms. Therefore, the references to "blue" and "gray" refer either to shades of pale and dark, "black" and "white," or to specific color terms. However, determining the nature of the colors "blue" and "gray" was not within the parameters of the study.

It is interesting to note that black and white occur in almost equal numbers in three of the four cases studied. This suggests black and white are used as paired opposites in the

---

9 These figures represent the total citation count for red, yellow, black, and white to the total color citation frequency for each tribe.
symbolic systems of the Crow, Pawnee, and Cheyenne. However, a system of paired opposites was not evident in the system of the Kiowa. Analysis of color categories indicates the Kiowa to be very different. A study of their folklore materials reveals eighty-five citations for white and only forty-seven citations for black. Furthermore, there are fifty-eight citations for red and fourteen citations for yellow. This indicates the Kiowa did not use a symbolic system involving the concept of paired opposites.

As Table 8-1 suggests, red is the pervasive color in Crow and Cheyenne folklore. Red paint was extensively used in the decoration of certain sections of the Sun Dance lodge. Additionally ceremonial pipes were painted red or were made from Catlinite, a red stone. Further, during certain stages of the ceremony, the initiate’s wife, wives of other warriors, and other women participants were completely covered with red paint.

The Pawnee and the Kiowa citation frequencies indicate a variation from this pattern, with white being the most pervasive color. White was followed by black (in the case of the Pawnee) and red (in the case of the Kiowa). However, further analysis of the color categories in Kiowa culture reveals a unique and complex structure while the Pawnee pair black and white categories like the Crow and Cheyenne.
In the Kiowa culture, red was the dominant ritual color as recorded in the ethnographies, but white has the higher rate of citations when compared to red in the early folklore materials. This possibly has correlations with the Peyote Society. According to Mooney, the seni disc, a sacred symbol of the Peyote Society, is represented among the fifty shield designs of the Kiowa tribe (Mooney 1898: 230-237). The disc is seen as a 'bright' center surrounded by a series of white spots. The emblem symbolized long life and good health. Therefore, white, in Kiowa culture, has correlations with Kiowa life.

To continue, most North Americanists contend that the number four is used universally to order ritual life. Certainly a study of number patterns through the ethnographic materials of the four tribes indicates a cultural predilection for the number four. Four functions as an important symbolic pattern in all of the ethnographies where ritual, ceremony, and dance are recorded. However, this study reveals a different pattern. A review of folklore materials reveals that the frequency of citations for four is often not as pervasive as those for the number two. Two and four appear to dominate number symbolism in all four tribes.
Table 8-4. Number Pattern Percentages

<table>
<thead>
<tr>
<th>Tribe</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow</td>
<td>475/694(^{10})</td>
<td>68%</td>
</tr>
<tr>
<td>Pawnee</td>
<td>351/486</td>
<td>72%</td>
</tr>
<tr>
<td>Kiowa</td>
<td>322/669</td>
<td>49%</td>
</tr>
<tr>
<td>Cheyenne</td>
<td>45/78</td>
<td>58%</td>
</tr>
</tbody>
</table>

Two and four dominate, but not to the extent that red, white, black and yellow dominate the color symbols. The frequency percentage for the Cheyenne categories of two and four indicates the dominant nature of the two numbers. If the sample of citations for the Cheyenne had been larger, the percentage for two and four might have been closer to that of the Pawnee and Crow. It is also possible the predilection for two as seen in three of the four tribes is conceptually aligned with "half of four" or "two by two" and indicates symmetrical but opposing pairs. The Kiowa, again, appear different, with the number ten almost as dominant as two and four.

Further, analysis of the related folklore materials indicates a very interesting number pattern. First, only the Crow folklore materials are consistent with the ethnographic

\(^{10}\) The second column of Table 8-4 contains the total frequency of two and four over the total number frequency for the tribe.
interpretations of ceremonial and ritual patterns involving the pervasiveness of the number four. In the case of the Kiowa and Cheyenne tribes, the variation from the number four indicates the possibility of trade and an existing trend of divergence that necessarily affected the cultural assimilation of ceremonies, such as the Sun Dance, where four functions as a symbolic element and is viewed as a pervasive ritual element. The pervasive nature of the number two in the folklore materials of the Kiowa and the Cheyenne indicates the presence of other existing symbolic trends. More simply, some ritual patterns, like the Sun Dance, were borrowed from other tribes. Consequently, their symbolic patterns are not as pervasive. The Kiowa Sun Dance and related ritual patterns were obtained from the Crow. In the case of the Cheyenne, the Sun Dance along with its symbolic patterns of four was obtained from the Suhtai also an Algonquian tribe.

The Pawnee also exhibit a predilection for the number two over the number four. At first, this appears surprising because four, in Pawnee culture, is symbolic of the universe. The number four functions with linkages to the four semi-cardinal directions, the four posts of the lodge, the Four World Quarter Stars, and the Four Leading Bundles. However, even though the frequencies of four and two are similar, it must be remembered that two has a correlation with the Pawnee
concept of the dualistic nature of the universe. That is, two represents the opposition of universal pairs, e.g., light and dark, male and female, winter and summer, and so on. Similarly, there are two basic divisions of ceremonial bundles. One division contains the Four Leading Bundles while the second division contains the thirteen Skidi ceremonial bundles. This ceremonial structure organizes the other cultural elements that delegate power and authority to the rest of Pawnee Society (i.e. the Four World Quarter Stars and the Four Leading Bundles).

Thus, many color and number patterns are important in the symbolic cosmology of the Crow, Pawnee, Kiowa, and Cheyenne. The number four and the color category of red are pervasive in their unique symbolic universe which includes warrior societies and related ritual patterns such as the Sun Dance.

The other dominant color and number pattern of white and two have correlations with visionary experience and star lore as seen in the Kiowa Peyote Society and the Pawnee folktales of the Morning Star. White was used to represent the symbol of the Peyote, the seni disc. The seni disc has been found on more than one fifty sacred shields. The significance of the color white in Pawnee culture appears to have a symbolic relationship with certain stars and planets such as Venus. White possibly symbolized flight (Weltfish 1965: 392).
Correspondingly, white is thought to have a symbolic relationship with the Morning Star as it travels through the heavens giving off a white light and smoke (Chamberlain 1982: 57).

To summarize, the variations found in the ethnographies and in the folklore materials is due to the following: each Native American culture studied has its own unique set of traditions and folktales. Where cultural similarities are found, such as the widespread Sun Dance ritual, variation is also found within those cultural systems. It is suggested that the processes of both diffusion and divergence affected the cultural assimilation of these borrowed symbols.

The Kiowa, who are linguistically related to the Tanoan speakers of the American Southwest, appear to be different from their neighbors the Crow, Pawnee, and Cheyenne. A follow-up study might consider the number and color symbolism of the Tanoans to discern whether the Kiowa pattern predates the migration(s) that separated that tribe from their linguistic cousins.

The theories of Brent Berlin, Paul Kay, the other structuralists, Franz Boas, and linguist George Lakoff proved to be very important in understanding the results of this study. The Berlin and Kay universal color theory suggested 1) human color perception to be in part physiological in nature
and 2) that it followed a fixed partial order or sequence. The model of Brent Berlin and Paul Kay, when applied to the early folklore texts, suggested at least four color or more categories for each of the four tribes. In the color systems of each of the four tribes, the colors red, white, black, and yellow accounted for over 90% of all color references. This indicates a possible cultural predilection for these colors. It also suggests the available paint materials of the times. According to the Berlin and Kay model and its predictions, the color green would be the next most common color after yellow if the languages had four to six color terms. Therefore, the references to "blue" and "gray" possibly refer either to dark or pale, to specific color terms, shades of green and blue, or to aspects of "black" and "white." They may also be simply mistranslations.

Franz Boas and the theory of historical particularism assisted in explaining individual tribal patterns, which were necessarily affected by unique cultural histories, and by the process of diffusion. The Crow, Pawnee, Kiowa, and Cheyenne migrated onto the plains, bringing with them unique aspects of their cultures. Each culture evolved to meet the new requirements resulting from such a migration.

Finally, the theories of Claude Levi-Strauss, G.D. Gombrich, George Lakoff, and others, contributed to the
understanding of the concept of paired opposites and its symbolic relationship to the numbers two, four, and the colors black and white patterns. Further, their work with universal, dualistic symbolic models and linkage became very important to the understanding of other color and number relationships inherent in each culture. Also important were certain cognitive tools used in symbolic analysis. Analogy, depth, juxtaposition, transition, opposition, and presentation, proved crucial to the analysis of subconscious elements affecting both the color and number patterns of the four tribes.
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Glossary
of Selected Color and Number Terms

=anta= (Kiowa) five
a`-sei (Kiowa) green
ask (Pawnee) one
ask-ka-ki (Pawnee) nineteen
bimba (Crow) green
bitk (Pawnee) two
bittken (Pawnee) eight
cipita (Crow) black
cir'a (Crow) yellow`
'Cngop (Kiowa) class (first)
copium (Crow) four
c'ua (Crow) blue
d'awi (Crow) three
duit (Pawnee) three
gu(a)dl (Kiowa) red
guat-kou (Kiowa) yellow
he:the (Kiowa) white
hicia (Crow) red
huree (Pawnee) green
(i) s'a`pua (Crow) seven

Please see the appendices for the appropriate reference information.
ka'-'K'iH (Kiowa)  
katit (possibly Pawnee)  
kots (possibly Pawnee)  
kou'-'gyh (Kiowa)  
mankagul (Kiowa)  
masa (Kiowa)  
ma-tox-toa (Cheyenne)  
mo-sox-toa (Cheyenne)  
na a (Cheyenne)  
ne-va (Cheyenne)  
ni huxsi-ni weha (Pawnee)  
nixa (Cheyenne)  
nohon (Cheyenne)  
no-ka (Cheyenne)  
o'neiguip'a (Kiowa)  
p=h-ou (Kiowa)  
pH-ga (Kiowa)  
p'H'ou-dl (Kiowa)  
pahati (possibly Pawnee)  
phanse'-tha; p'Hnsei-t'H

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11 Gene Weltfish and Mark Everts contend the term katit gives definition to staturation and therefore includes dark, black, dark blue, etc. It also has been referred to the term as ti'-ka-tit.
pir ake' (Crow) ten

Puhuweturukut (Pawnee) entrance way, thirteenth month

rakata (possibly Pawnee) yellow

sae,sa-e (Kiowa) blue-green,

blue

sei-dl (Kiowa) brown

seidix (Pawnee) four

skiks habits (Pawnee) seven

six-hux-taru-gitts (possibly Pawnee) fifteen

si da-wi (possibly Pawnee) sixteen

sihuks (Pawnee) six

ru'pet (Crow) two

taka (possibly Pawnee) white

tau-widi-hax-sid (Pawnee) thirteen

tsax'u (Crow) five

tsaeigul (Kiowa) Red Horse

ts'ia (Crow) white

xi'ri (Crow) gray

y'H-gyh (Kiowa) four

yht'-sei (Kiowa) eight

yi-h-kadl-the (Kiowa) two

zehoovaneotto (Cheyenne) melon

zemuxtavoetto (Cheyenne) black
<table>
<thead>
<tr>
<th>Cheyenne Word</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>zemsiskan</td>
<td>reddish brown</td>
</tr>
<tr>
<td>zeoseotatavoetto</td>
<td>deep blue</td>
</tr>
<tr>
<td>zeosezeovxtav</td>
<td>golden-yellow</td>
</tr>
<tr>
<td>zepocotto</td>
<td>gray</td>
</tr>
<tr>
<td>zevcxpoetto</td>
<td>white</td>
</tr>
</tbody>
</table>
Appendix
Appendix: Chapter 4

Color and number frequencies was determined by the number of times the Crow color or number term is linked within the folklore material. The page numbers refer to only the page where the data was found and not the frequency.\textsuperscript{12}

\textbf{Color Index}

\textbf{Red (hicia)} - Total frequency: 154

Pages:
14; 28; 29; 30; 31; 46; 54; 70; 80; 81; 84; 86; 88; 107; 114; 115; 121; 125; 126; 128; 131; 132; 133; 141; 142; 143; 148; 160; 169; 170; 173; 204; 205; 219; 219; 246; 248; 249; 250; 270; 283; 284; 286; 299; 304.

\textbf{Black (cipita)} - Total frequency: 147

Pages:
20; 27; 32; 37; 39; 52; 54; 67; 81; 83; 84; 88; 97; 98; 105; 107; 110; 115; 124; 125; 126; 131; 138; 139; 144; 145; 153; 154; 158; 159; 165; 167; 168; 169; 171; 172; 173; 178; 179; 181; 195; 205; 207; 214; 224; 226; 227; 228; 229; 230; 242; 246; 247; 248; 253; 271; 282; 284; 299.

\textbf{White (ts'ia)} - Total frequency: 144

Pages:
16; 31; 72; 81; 87; 88; 94; 97; 98; 103; 108; 138; 142; 144; 148; 149; 152; 154; 165; 166; 170; 175; 176; 177; 190; 192; 196; 197; 200; 211; 219; 220; 225; 226; 228; 230; 231; 246; 250; 251; 253; 258; 270; 271; 298.

\textbf{Yellow (cir'e)} - Total frequency: 108

\textsuperscript{12}Lowie, Robert
Blue (c'ua) - Total frequency: 26

Pages: 30; 38; 39; 82; 83; 85; 88; 102; 103; 104; 105; 106; 107; 108; 122; 123; 146; 148; 149; 159; 160; 169; 173; 188; 191; 195; 196; 231; 237; 249; 269; 280; 282; 295; 296; 297

Gray (xi'ri (a)) - Total frequency: 24

Pages: 41; 130; 132; 141; 143; 144; 189; 191; 247; 270; 276; 285; 292.

Green (bimba) - Total frequency: 4

Pages: 31; 83

Brown (see red) - Total frequency: 2

Pages: 246; 285

Number Index

Four (copium) - Total Occurrence: 248

Pages: 14; 15; 16; 17; 18; 23; 25; 26; 27; 28; 28; 36; 52; 55; 56; 58; 59; 60; 62; 63; 64; 66; 67; 68; 76; 79; 82; 83; 85; 92; 97; 99; 101; 102; 103; 104; 105; 108; 109; 115; 119; 121; 123; 126; 129; 130; 133; 137; 138; 139; 140; 142; 143; 145; 146; 147; 148; 149; 151; 153; 154; 155; 158; 159; 161; 163; 167; 168; 169; 171; 174; 176; 178; 180; 187; 190; 191; 192; 195; 196; 199; 200; 201; 202; 203; 204; 205; 206; 207; 208; 209; 210; 216; 217; 219; 221; 222; 223; 224; 227; 229; 230; 231; 232; 233; 239; 240; 242; 243; 244; 245; 248; 249; 251; 252; 253; 254; 255; 257; 259; 264; 269; 270; 272; 276; 285; 286; 289; 291; 292; 293; 294; 297; 298; 304.

Two (ru'pet) - Total Occurrence: 227

Pages: 19; 21; 22; 25; 26; 37; 43; 46; 47; 49; 44; 48; 52; 54; 55; 57; 58; 60; 61; 62; 64; 65; 67; 68; 69; 70; 73; 74; 75; 76; 78; 81; 86; 88; 89; 90; 92; 93; 94; 95; 96; 97; 98; 100; 101; 102; 104; 105; 107; 113; 123; 125; 126; 127; 130; 131; 134; 136; 137; 139; 140; 142; 144; 145; 146; 147; 148; 152; 153; 154; 156; 157; 163; 161; 165; 167; 168; 169; 174; 175; 176; 177; 178; 179; 177; 178; 179; 180; 181; 187; 188; 189; 190; 191; 192; 195; 196
One - Total Occurrence: 80

Pages:
14;15;16;41;48;54;61;66;69;70;74;76;77;78;83;84;85;89
95;96;97;98;99;100;101;102;108;113;128;136;154;146;147;163;1
75;176;177;178;180;181;182;183;184;189;192;193;197;200;211;2
20;221;223;226;227;233;234;238;241;244;252;
252;253;254;255;260;262;263;266;271;277;279;284;288;293
296;297;299;300;301;302.

Three (d’awi) - Total Occurence: 56

Pages:
16;21;36;37;46;47;49;52;54;61;66;69;70;74;76;77;78;83;84;85;89
95;96;97;98;99;100;101;102;108;113;128;136;154;146;147;163;1
75;176;177;178;180;181;182;183;184;189;192;193;197;200;211;2
20;221;223;226;227;233;234;238;241;244;252;
252;253;254;255;260;262;263;266;271;277;279;284;288;293
296;297;299;300;301;302.

Five (tsax’u) - Total Occurrence: 13

Pages:
87;128;133;158;190;199;202;243;250;252;258;285;294.

Six - Total Occurrence:17

Pages:
230;236;239;241;242;243;244;245;247;248;252;257;289;295299;3
03;304.

Seven {(i) s’a`pua} - Total Occurrence: 23

Pages:
18;46;48;101;104,121;123;126;157;158;159;160;161;162;164;165
168;181;191;205;211;221.

Eight - Total Occurrence: 3

Pages: 121;132;201.

Nine - Total Occurrence: 3

Pages: 171;285;294.
Ten (pir ake') - Total Occurrence: 25

Pages:
16;20;26;77;85;107;113;132;151;173;175;178;188;202;228;245;251;252;257;260;264;280;295;296;297.

Multiples of Ten - Total Occurrence: 15

Pages:
26 26;28;104;105;112;113;132;135;137;141;188;248;250;262;
Appendix: Chapter 5

Color and number frequencies are determined by the number of times a Pawnee color or number term is cited or linked within the selected folklore material. The page number refers only to where terms found within a text, it does not refer to the frequency.\textsuperscript{13}

Color Index

White: (taka) - Total frequency: 117

Pages:
15; 44; 49; 52; 54; 62; 68; 72; 76; 77; 78; 79; 81; 84; 93; 95; 99; 114; 116; 117; 124; 125; 126; 176; 192; 193; 194; 203; 204; 205; 215; 216; 220; 277; 289; 290; 324; 351; 364; 375; 675; 381; 383; 386; 392; 393; 403; 408; 410; 465; 468.

Black/Dark Blue/ Brown/Dark: (katit) - Total frequency: 115

Pages:
15; 18; 44; 45; 46; 51; 54; 55; 59; 64; 72; 75; 80; 82; 83; 98; 100; 101; 107; 135; 136; 137; 149; 150; 154; 159; 160; 166; 171; 179; 184; 185; 186; 188; 189; 204; 206; 214; 216; 220; 222; 225; 229; 230; 231; 234; 237; 262; 270; 271; 262; 282; 289; 290; 294; 296; 297; 298; 299; 308; 315; 319; 320; 323; 324; 333; 342; 351; 358; 359; 360; 362; 364; 375; 382; 383; 386; 387; 392; 409; 468.

Red: (pahati) - Total frequency: 80

Pages:
15; 18; 29; 37; 38; 45; 53; 56; 66; 71; 91; 93; 107; 135; 149; 182; 202; 207; 209; 211; 212; 220; 262; 264; 267; 281; 282; 283; 290; 301; 320; 324; 325; 326; 342; 348; 350; 351; 383; 403; 413.

Yellow/Golden: (rakata) - Total frequency: 48

\textsuperscript{13} Dorsey, George
Pages:
15; 53; 72; 78; 88; 93; 95; 159; 174; 175 182; 322; 324; 327; 328; 329; 330; 348; 350; 351; 352; 409.

Dun: not found- Total Frequency: 13

Pages:
359; 360; 361; 362.

Blue: (kots) - Total Frequency: 26

Pages:
20; 25; 29; 34; 53; 55; 86; 107; 113; 166; 181; 227; 311; 315; 317; 358; 364; 366; 376; 378; 393; 448.

Green: (huree) - Total Frequency: 3

Pages:
54; 268; 324.

Gray (not found) - Total Frequency: 1

Pages:
359.

Number Index:

One: (ask/askus) - Total Frequency: 49

Pages:
16; 74; 80; 99; 124; 144; 152; 248; 258; 259; 260; 261; 276; 278; 280; 360; 361; 362; 363; 376; 387; 387; 390; 391; 393; 394; 395; 396; 397; 406; 422; 423; 458; 459; 465; 466.

Two: (bitk) - Total Frequency: 185

Pages:
14; 16; 17; 18; 19; 22; 24; 28; 31; 37; 41; 42; 43; 45; 46; 48; 49; 52; 60; 62; 63; 64; 68; 72; 73; 74; 75; 76; 80; 102; 112; 118; 124; 135; 148; 150; 152; 153; 154; 155; 166; 167; 172; 196; 208; 233; 234; 242; 243; 248; 257; 260; 263; 274; 279; 304; 305; 309; 214; 315; 318; 319; 323; 327; 328; 342; 344; 345; 346; 348; 349; 353; 357; 359; 360; 374; 374; 375; 376; 379; 380; 383; 384; 385; 387; 389; 396; 398; 401; 406; 417; 422; 423; 444; 448; 454; 457; 458; 465; 470.

Three: (duit) - Total Frequency: 66
Four: (seidix) - Total Frequency: 167

Pages:
14; 15; 16; 18; 19; 20; 25; 26; 27; 28; 29; 30; 31; 38; 45; 52; 71; 73; 74; 78; 83; 86; 89; 93; 95; 98; 99; 101; 102; 105; 112; 114; 118; 119; 131; 133; 134; 141; 148; 150; 155; 158; 187; 188; 206; 211; 212; 215; 229; 230; 238; 240; 243; 243; 245; 246; 248; 256; 275; 277; 290; 293; 298; 301; 302; 303; 309; 331; 332; 345; 347; 351; 353; 375; 376; 379; 400; 401; 405; 407; 415; 419; 424; 434; 440; 442; 423; 448; 448; 464.

Five (not found) - Total Frequency: 17

Pages:
17; 14; 32; 57; 81; 102; 109; 187; 301; 344; 352; 464.

Six: (sihuks) - Total Frequency: 6

Pages:
122; 168; 348; 376; 327.

Seven: (skiks habits) - Total Frequency: 14

Pages:
29; 37; 38; 78; 86; 122; 168; 179; 352; 363.

Eight: (bittken sixhabits) - Total Frequency: 2

Pages:
28; 205.

Nine: (tauwix habits) - Total Frequency: 0

Ten: (nihuxsi-niweha) - Total Frequency: 15

Pages:
14; 38; 45; 272; 278; 344; 347; 376.

Eleven: (nihux-sid) - Total Frequency: 1

Page: 121
Twelve: (ask-ka-su-sidd) - Total Frequency: 1
Page: 113

Thirteen: (tau-widi-hax-sid) - Total Frequency: 1
Page: 240

Nineteen: (ask-ka-ki) - Total Frequency: 1
Page: 450.

Twenty: (bit-dau) - Total Frequency: 4
Pages 112; 113; 450.

Twenty-six: (not found) - Total Frequency: 1
Page: 29.

Thirty-nine: (not found - Total Frequency: 1
Page: 141.

Forty: (bid-ku-su-nard/pikusura:ru) - Total Frequency: 1
Page: 67.

Fifty: (Bid-ku-su-nard-ni-huxsi) - Total Frequency: 2
Pages: 67; 141

Sixty: (tau-wi-nard) - Total Frequency: 1
Pages: 60.

Sixty-seven: (not found) - Total Frequency: 1
Page: 141

Seventy-six: (not found) - Total Frequency: 1
Page: 141.

One Hundred and Twenty: (not found) - Total Frequency: 1
Page: 376.
Appendix: Chapter 6

Color and number frequencies are determined by the number of times the Kiowa color and number terms have been cited or linked with each other, or other images, within the selected folklore material. The page numbers refer only to where terms were found, they do not indicate frequency.\textsuperscript{1415}

**Color Index:**

Blue/Black: \((sa-e)\)-Total frequency: 1

Pages: 122

Blue: \((sa-e\text{ or } sahyei)\)- Total frequency: 8

Pages: 5; 122; 123; 128; 129.

Green: \((a’-sei)\)- Total frequency: 5

Pages: 5; 104; 106; 123.

Yellow: \((guat-kou)\)-Total frequency: 14

Pages: 5; 91; 92; 99; 106; 122; 123; 132; 134.

Rainbow Paint: \((tsou-e-kua-t)\) (paint)-Total frequency: 1

Pages: 123.

\textsuperscript{14}Parsons, Elsie Clews

\textsuperscript{15}Harrington, John P.
Pink: (no term found)—Total frequency: 1

Pages:
123.

Brown: (sei-xl)—Total frequency: 2

Pages:
113; 119.

Grey: (p‘eip’-the)—Total frequency: 1

Pages:
70.

Flesh Color: (ka=gyh~ gua-xl) (skin colored i.e. red or spanish colorado)—Total frequency: 1

Pages:
118.

White: (he:the)—Total frequency: 85

Pages:
4; 17; 18; 19; 20; 22; 23; 24; 35; 46; 64; 65; 66; 70; 75; 77; 79; 80; 89; 92; 93; 94; 101; 105; 109; 112; 117; 118; 119; 120; 123; 129; 131; 134; 139;

Black: (kou’gyh)—Total frequency: 38

Pages:
17; 18; 24; 25; 65; 67; 74; 91; 93; 94; 98; 101; 106; 107; 116; 119; 123; 130; 135; 138; 139.

Red: (gu(a)xl)—Total frequency: 56

Pages:
6; 15; 16; 17; 18; 20; 38; 47; 48; 49; 77; 78; 79; 80; 81; 89; 92; 101; 106; 107; 109; 115; 116; 122; 129; 123; 130.

Number Index:

One: (pH-ga)—Total frequency: 52

Pages:
First: (tam) - Total frequency: 15

Pages:
55; 60; 61; 62; 64; 65; 66; 70; 75; 77; 99; 105; 107; 136.

Two: (yiH) - Total frequency: 155

Pages:
2; 3; 5; 7; 8; 9; 11; 12; 14; 15; 16; 18; 19; 20; 21; 24; 25;
30; 32; 34; 40; 42; 47; 50; 54; 55; 57; 60; 61; 62; 63;
64; 72; 76; 77; 81; 84; 86; 89; 90; 91; 91; 92; 94; 95; 96;
97; 98; 99; 100; 105; 106; 107; 110; 111; 112; 113; 116; 119;
120; 121; 125; 130; 131; 133; 134; 135; 136; 137; 138.

Second: (yHt-dei) - Total frequency: 25

Pages:
10; 41; 55; 60; 61; 62; 63; 64; 72; 76; 77; 78; 99; 135; 136.

Three: (p h-ou) - Total frequency: 38

Pages:
3; 8; 11; 3; 37; 41; 54; 55; 73; 75; 76; 78; 90; 91; 103; 106;
107; 111; 119; 120; 122; 129; 134; 136; 138; 139.

Third: (p=h=out-dei) - Total frequency: 20

Pages:
10; 12; 41; 50; 54; 55; 60; 65; 70; 72; 77; 78; 79; 98; 100;
106; 135.

Four: (yiH-gyH) - Total frequency: 113

Pages:
6; 7; 10; 11; 14; 20; 30; 32; 33; 42; 49; 50; 55; 60; 61; 62;
64; 65; 72; 73; 75; 76; 77; 86; 89; 90; 91; 98; 99; 100; 101;
102; 103; 104; 105; 106; 107; 109; 111; 112; 113; 115; 116;
119; 120; 121; 122; 124; 131; 132; 133; 134; 135; 137; 138;
139.

Fourth: (yiHgyht`-dei) - Total frequency: 29

Pages:
Five: (=anta=) - Total frequency: 10
Pages:
70; 92; 120; 122; 124; 129;

Five x five: (=anta-t)-Total frequency: 4
Pages:
94; 102; 102; 126.

Fifth: (‘antat-dei)- Total frequency: 7
Pages:
120; 120; 122; 124; 129.

Six: (masa)-Total frequency: 11
Pages:
6; 80; 86; 89; 125; 126; 134.

Sixth: (masa-dei)- Total frequency: 5
Pages:
71; 102; 103; 134.

Seven: (pH’ou-dl)- Total frequency: 10
Pages:
70; 71; 75; 80; 100; 125; 135.

Seventh: (P=Hnsein-dei)- Total frequency: 4
Pages:
70; 71; 78; 105.

Eight: (yHT-sei)- Total frequency: 2
Pages:
124; 128.

Eighth: (yHt=sein-dei)- Total frequency: 4
Pages:
111; 116; 124; 126.

Nine: (kat=sei) - Total frequency: not found
Ninth: probably (kat=sein-dei) - Total frequency: 3
Pages:
106; 136.

Ten: (ka=-kiH) - Total frequency: 18
Pages:
9; 59; 96; 99; 111; 116; 117; 121; 125; 126; 128.

Tenth: (ka=k=yHn-dei) - Total frequency: 106
Pages:
107

Eleven: (pH=-t`h) - Total frequency: 1
Pages:
92.

Twelve: (yiH-t=H) - Total frequency: 2
Pages:
69; 130.

Thirteen: (p=H=ou-K=iH) - Total frequency: 1
Pages:
123.

Fourteen: (yht`gyH-t=H) - Total frequency: 2
Pages:
123; 130.

Fifteen: (=anta=-t=H) - Total frequency: 3
Pages:
120; 123; 130.

Sixteen: (masa=-t=H) - Total frequency: 8
Pages:
90; 93; 123; 130; 136.

Seventeen: (p`Hnsei-t=H) - Total frequency: 8
Pages:
130

Twenty: \((yiHK=iH)\) - Total frequency: 10

Pages:
20; 88; 92; 93; 99; 119; 126.

Twenty-two: \((yiHK=iH yiH\text{-}t\text{'}H)\) - Total Frequency: 3

Pages:
100; 102; 123.

Twenty-four: probably \((yiHK=iH yiHgyH\text{-}t\text{'}H)\)
- Total Frequency: 1

Pages:
119.

Twenty-five: probably \((yiH\text{-}K=iH yiH\text{'}anta=-t\text{'}H)\)
- Total Frequency: 1

Pages: 91

Thirty: \((p=H=ou\text{-}k\text{'}iH)\) - Total Frequency: 4

Pages:
92; 109; 119.

Forty: \((yHt\text{'}gyH\text{-}k\text{'}iH)\) - Total Frequency: 1

Pages:
92.

Sixty: \((masa\text{'-}k\text{'}iH)\) - Total frequency: 2

Pages:
96; 131.

Seventy: \((p\text{'}hnsei-k\text{'}iH)\) - Total frequency: 1

Pages:
96.

Eighty: \((yHt\text{'}sei-k\text{'}iH)\) - Total frequency: 3

Pages:
111; 116.
Appendix: Chapter 7

Color and number frequencies have been determined by the number of times the Cheyenne color or number term has been cited or linked within the folklore material. The page numbers refer only to where the material was located, they do not indicate frequency.\(^\text{16}\)

**Color Index:**

Reddish brown, red: \((xemavoetto,xemavoetto)\)
- Total frequency: 32

Pages:
34, 35, 36, 36, 37, 39, 42, 44, 45, 45.

Black: \((zemiskan)\) - Total frequency: 7

Pages:
39, 42, 44.

Dark: \((zemoktav)\) - Total frequency: 2

Pages:
46; 47

White: \((zevcypoetto)\) - Total frequency: 8

Pages:
34, 35, 37, 44.

Yellow: \((zeosezeovxtav)\) - Total frequency: 4

Pages:
93, 39, 39, 44.

Blue: \((zeoseotatavoetto)\) - Total frequency: 1

\(^{16}\)Dorsey, George
1905 *Cheyenne. Volume One: Ceremonial Organization.*
Anthropological Series Number IX. Number one. Field Columbian Museum. Publication number 99.
Gray: (zepocotto) - Total frequency: 0

Pages:
0

Green: (zeoxzevoetto) - Total frequency: 0

Pages:
0

**Number Index:**

Two: (nixa) - Total Occurrence: 19

Pages:
37, 39, 40, 41, 42, 47, 44, 49.

Four: (ne-va) - Total Occurrence: 12

Pages:
37, 38, 39, 41, 43, 44, 45, 48

Fourth: (not found) - Total Occurrence: 9

Pages:
37, 41, 44, 46

Second: - Total Occurrence: 5

One: (no-ka) - Total Occurrence: 8

Pages:
39, 40, 44, 45, 47, 49

Ones: - Total Occurrence: 1

Pages:
42

First: - Total Occurrence: 3

Pages:
34, 40, 42

Three: (na a) - Total Occurrence: 5
Pages: 
34, 37, 39, 41, 49.

Third: - Total Occurrence: 2

Pages: 
34, 44

Six: (na-sox-toa) - Total Occurrence: 1

Pages: 
42

Seven: (ni-sox-toa)- Total Occurrence: 0

Pages: 

Ten: (ma-tox-toa) - Total Occurrence: 1

Pages: 
42

Five: (nohon)- Total Occurrence: 4

Pages: 
42, 44, 45, 47

Fifth - Total Occurrence: 2

Pages: 
44, 44

Six: (na-sox-toa) - Total Occurrence: 1

Pages: 
42

Eight: (na-nox-toa) - Total Occurrence: 1

Pages: 
44

Nine: (so-ox-toa)- Total Occurrence: 0

Pages: 

Twenty: (ni-so’e)- Total occurrence: 2

Pages: 

46, 38

Forty: (nivoe') - Total occurrence: 1

Pages:
47

Thousand(s) - Total Occurrence: 2

Pages:
38, 38