

# Indigenous Graphic Communication Systems

---

*A Theoretical Approach*

*Edited by*

Katarzyna Mikulska  
*and* Jerome A. Offner

University Press of Colorado  
*Louisville*

© 2019 by University Press of Colorado

Published by University Press of Colorado  
245 Century Circle, Suite 202  
Louisville, Colorado 80027

All rights reserved  
Printed in the United States of America



ASSOCIATION  
OF UNIVERSITY  
PRESSES

The University Press of Colorado is a proud member of  
the Association of University Presses.

The University Press of Colorado is a cooperative publishing enterprise supported, in part, by Adams State University, Colorado State University, Fort Lewis College, Metropolitan State University of Denver, University of Colorado, University of Northern Colorado, Utah State University, and Western State Colorado University.

∞ This paper meets the requirements of the ANSI/NISO Z39.48-1992 (Permanence of Paper).

ISBN: 978-1-60732-876-6 (cloth)

ISBN: 978-1-60732-935-0 (ebook)

DOI: <https://doi.org/10.5876/9781607329350>

Library of Congress Cataloging-in-Publication Data

Names: Offner, Jerome A., editor. | Mikulska, Katarzyna, editor.

Title: Indigenous graphic communication systems : a theoretical approach / edited by Katarzyna Mikulska, Jerome A. Offner.

Description: Louisville : University Press of Colorado, [2018] | Includes bibliographical references and index.

Identifiers: LCCN 2019018476 | ISBN 9781607328766 (cloth) | ISBN 9781607329350 (ebook)

Subjects: LCSH: Indians of Mexico—Languages—Writing. | Indians of Central America—Languages—Writing. | Indians of South America—Andes Region—Languages—Writing. | Picture-writing—Mexico. | Picture-writing—Central America. | Picture-writing—Andes Region. | Visual communication—Mexico. | Visual communication—Central America. | Visual communication—Andes Region.

Classification: LCC F1219.3.W94 I54 2018 | DDC 972/.01—dc23

LC record available at <https://lccn.loc.gov/2019018476>

The University Press of Colorado gratefully acknowledges the generous support of the Houston Museum of Natural Science toward the publication of this book.

ILLUSTRATION CREDITS. TOP RIGHT: Fonds mexicain 2, Bibliothèque nationale de France; UPPER CENTER (LEFT TO RIGHT): Museo Larco, Lima—Perú, ML000639, ML000230, ML001347, ML000214, ML0002041; LOWER CENTER: Codex Borgia (Codex Borg. Mess. 1), planche 42. © 2019 Biblioteca Apostólica Vaticana; BOTTOM LEFT: RJM 60305, Rautenstrauch-Joest-Museum, Köln, Germany; photograph by Marion Mennicken; BOTTOM RIGHT: Northern crest, photograph by W. B. Murray.

## Contents

<i>List of Figures</i>	vii
<i>List of Tables</i>	xv
<i>Preface and Acknowledgments</i>	xvii

Introduction: Indigenous Graphic Communication Systems:  
A Theoretical Approach

<i>Katarzyna Mikulska</i>	3
---------------------------	---

### SECTION 1: ON SEMASIOGRAPHS AND SEMASIOGRAPHY

---

- 1 On the Classification of Graphs in Central Mexican Pictorial Writing  
*David Charles Wright-Carr* 25
- 2 The System of Graphic Communication in the Central Mexican  
Divinatory Codices from the Functional Perspective  
*Katarzyna Mikulska* 41

### SECTION 2: METAPHOR, ORALITY, AND SPACE

---

- 3 The “Law of the Series”: A Proposal for the Decipherment of Aztec Ritual  
Language  
*Danièle Dehouve* 95

- 4 Sacrifice in the *Codex Borgia*: Examples from an Inventory of Phrases  
*Angélica Baena Ramírez* 123
- 5 Clothes with Metaphorical Names and the Representation of Metaphors  
in the Costumes of the Aztec Gods  
*Loïc Vauzelle* 154
- 6 What Lies Beneath: Generating Mesoamerican Media Surfaces  
*Jerome A. Offner* 180
- 7 Traces of Orality in the *Codex Xolotl*  
*Katarzyna Szoblik* 204

SECTION 3: RECONNOITERING THE PERIPHERY

---

- 8 On the Iconic Nature of *Tocapus* and Other Framed Motif Units  
*Christiane Clados* 233
- 9 Geometric Motifs in Rock Art as a System of Visual Communication  
*Stanisław Iwaniszewski* 257
- 10 Status Markers in Moche Iconography  
*Janusz Z. Wołoszyn* 274

SECTION 4: GOING INTO DETAIL

---

- 11 Hieroglyphs of Virtue and Vice: On the Interplay of Writing and Iconography  
*Gordon Whittaker* 299
- 12 An Approach to Anthroponymic Glyphs in Nahuatl Writing Contained in  
*El Libro de los Tributos de San Pablo Teocaltitlan* or the *Codex Valeriano*  
*Juan José Batalla Rosado and Miguel Ángel Ruz Barrio* 312
- 13 The Making of Academic Myth  
*Michel R. Oudijk* 340
- Afterword  
*Jerome A. Offner* 376
- About the Authors* 381
- Index* 383

---

## The “Law of the Series”

*A Proposal for the Decipherment of Aztec Ritual Language*

*Danièle Dehouve*

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE,  
PARIS NANTERRE; PSL-ECOLE PRATIQUE DES HAUTES  
ETUDES, PARIS SORBONNE

*Translation by Jerome A. Offner*

HOUSTON MUSEUM OF NATURAL SCIENCE

For more than a century, Mesoamericanists have been aware that the decipherment of symbolism is a mandatory step toward understanding religion, ritual, and the iconographic and linguistic expressions of precontact Mexico, but their efforts have run up against the polysemy of its symbols and the pervasive correspondences among its figures and symbols. Jacques Soustelle (1940, 9) highlighted this difficulty in evoking the “swarms of images” that pervaded Aztec ceremonies. Under these conditions, how is it possible to be certain of the validity of an interpretation and to avoid falling into overinterpretation? I propose here that the use of symbolism follows principles and that the discovery of the logic within ritual language production may provide a secure and systematic method for deciphering symbols.

The chapter that follows is dedicated to the presentation of one of these principles: the “metonymic series.” It argues that the semantic unit of Mesoamerican ritual discourse is not the word but the association of several words in “series” that define a thing, a being, or an action through the enumeration of its components or manifestations. The series thus constituted can receive oral (in speech), material (in the form of objects), and theatrical (in acts performed during rituals) expression, all forms of communication that I include under the name of “ritual language.” The chapter is titled “law of the series,” not as it is commonly used in the saying that misfortunes occur in series (an idea that arises from the book *Das Gesetz der Serie*, written by the Austrian biologist Paul Kammerer in 1919) but to emphasize that the establishment of series obeys rules—or laws—that need to be listed. The

basis of my reflection arises from a study carried out in a systematic way beginning in 2000 within an indigenous population in Mexico: the Tlapanecos, or Me'phaa, speakers of a language of the Otomanguean group in the State of Guerrero. I called attention to their use of series as part of their ceremonies and prayers (Dehouve 2007, 2011a, 2013). Later, starting in 2006, I approached Aztec rituals with the help of an ethnographic method consisting of reading Nahuatl descriptions compiled in the sixteenth century by Bernardino de Sahagún among his informants from the central highlands (*Florentine Codex*, hereafter *FC*. The part in Spanish called *History of the Things of New Spain* will be abbreviated *HG*; see Sahagún 1950–1982, 1956, 1979). I found again in these texts the process of creating series, which I also recognized in some pictographic manuscripts (Dehouve 2009, 2013, 2014a). Thus in regard to both the Tlapanecos and the Nahuas, my efforts at decipherment of symbolism are intended to be based on *emic* procedures, that is, those used by the people themselves. In this chapter I endeavor to present some consequences of the use of series in Aztec ritual language.

#### THE METONYMIC SERIES AND DEFINITION BY EXTENSION

The Aztecs used series in a way unique to them. Nevertheless, generation of series is a cognitive procedure that pertains to all humanity, and therefore it is useful to take as a starting point the reflections the discipline of logic has developed regarding series. According to the French dictionary (*Le Petit Robert* 1978, “Extension”), there are two ways to define a word. “Definition by extension” expresses a whole through the enumeration of its parts: “Extension of a word refers to the totality of the beings or things designated by this name.” Thus, for example, to define the word *man*, a series of men may be listed: Peter, Paul, and so on. “Definition by comprehension” (“intension,” see below), conversely, enunciates the “set of characteristics belonging to a concept”—in the case under consideration, the attributes men have in common, such as upright posture and language.

The corresponding terms in English are *extension* for extension and *intension* for “comprehension”: “‘Intension’ indicates the internal content of a term or concept that constitutes its formal definition; and ‘extension’ indicates its range of applicability by naming the particular objects that it denotes. For instance, the intension of ‘ship’ as a substantive is ‘vehicle for conveyance on water,’ whereas its extension embraces such things as cargo ships, passenger ships, sailing ships and battleships” (*Encyclopedia Britannica*, “Intension and extension,” n.d.).

This distinction comes from the logic of the early twentieth century, heir to preceding centuries with their concepts of “denotation” and “connotation.” Indeed, “extension” is based on “denotation,” that is, the relationship between a word and

the thing it designates ("man = Pedro"); and *intension* or "comprehension" is based on "connotation," that is, the relationship between a word and the properties that correspond to it ("man = upright posture, language . . ."): "a name is said to *connote* a property or properties belonging to the object it is predicated of" (Mill 1878 [1829], 170–171, emphasis added). The signification-denotation of a word is extended to a greater or lesser degree, that is, it suits a greater or lesser number of subjects and is therefore called extension. The signification-connotation of a word is intense to a greater or lesser degree, that is, full and rich, and is therefore called *intension* or comprehension (Goblot 1918, 102).

As mentioned, "extension" exists in all cultures, and for that reason I can proceed with a European example. In 1563 the painter Giuseppe Arcimboldo executed four canvases representing the four seasons. If we take the example of *Summer* (Kunsthistorisches Museum, Vienna, <https://www.khm.at/objektdb/detail/71/>), we see that it consists of an anthropomorphic representation (by means of a man's face), which defines the season by an enumeration of all the products that belong to it: gourds, cherries, wheat, peas, peaches, maize, potatoes, melons, artichokes . . . In other words, it is a definition by extension. In contrast, the definition by comprehension or *intension*, based on the properties of this season, would read something like: "Warmest season in the year, between spring and summer [ . . . ] defined as the period between summer solstice [ . . . ] and autumnal equinox, etc." (*Encyclopædia Britannica*, "Summer season").

Continuing with the effort to identify the mechanisms of thought involved in definition by extension, it should be emphasized that it produces "metonymic series." Metonymy is a trope (i.e., a figure of style) for connection that consists of designating an object with the name of another object that constitutes with it a set or a whole. Thus it contains a relationship of inclusion or contiguity. Synecdoche is the very essence of metonymy; it takes the whole for the part or the part for the whole, as when a boat is designated by the word *sail*. In the painting *Summer* by Arcimboldo, the series made up of gourds, cherries, wheat, peas, and other items is metonymic because it lists the elements conforming to the whole under consideration: summer.

The definition just given comes from the catalog of figures of rhetoric popularized in the West by the famous *Institutio Oratoria* of Quintilianus (1974), composed in the first century of our era. But during the course of the twentieth century, the work of George Lakoff and Mark Johnson (1980) showed that tropes constitute ways of thinking and not only ways of speaking. According to the work of these two authors, metonymy represents a kind of metaphor that is not a simple figure of style but a cognitive procedure. The human conceptual system itself is structured and defines things in a metaphorical manner, or said another way, "man understands

and experiences one kind of thing in terms of another” (Lakoff and Johnson 1980, 5). As such, enunciating the metaphor “this man is a lion,” one thing (Peter) is thought of in terms of another thing (a lion). In metonymy properly considered, a waiter who says “the ham sandwich is asking for its bill” thinks of one thing (the customer) in terms of another thing with which the customer has a relationship of contiguity (the ham sandwich he is eating).

Since that time, several researchers have tended to speak of Conceptual Metaphor and Conceptual Metonymy. As this chapter is dedicated to “series,” I will only consider the second case, that of Conceptual Metonymy, defined as follows: “Conceptual metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same conceptual domain, or ICM [idealized cognitive model]. In metonymy, both the vehicle entity and the target entity are elements of the same conceptual domain” (Kövecses 2010, 324).

In *Summer* by Arcimboldo, one thing or entity (gourds, cherries . . .) provides mental access to another entity that belongs to the same conceptual domain (summer). But what is most important in the proposals of Lakoff and Johnson and their successors is that they enable us to recognize the existence of metonymic series, not only in lists of words but also in representations of things. In other words, defining summer as a metonymic series of products can be accomplished as much through speech as through painting a picture or arranging real vegetables, fruits, and cereals.

After presenting these definitions, I conclude that definition by extension constructs a metonymic series, since it lists the elements that make up the set being considered. European thinkers of the last two centuries considered extension to be a way of thinking that logical reflection should avoid since “the extension of a concept as an infinite number of unique subjects, the comprehension [intension] of which is infinite, escapes understanding. It could only be known by enumeration. But enumeration of all singular subjects is impossible because they are without number. In contrast, the comprehension [intension] of a concept can be constructed by means of other concepts in a limited number” (Goblot 1918, 104, transl. Jerome Offner).<sup>1</sup>

Contrary to those assertions, the Aztec case will show us that extension, far from a trivial procedure, opens up the possibility of constructing myriad images and symbols through very elaborate mechanisms. As Marcel Mauss (1974, 130–131) claimed, reason has the same collective and voluntary origin in the most ancient societies and in the most complex forms of philosophy and science. The collective will simply not does take the same direction in both cases. Let us now follow in the footsteps of the thinking that built the Aztec ritual language.



## DEFINITION BY EXTENSION AMONG THE AZTECS

Definition by extension constituted one of the major intellectual tools of ritual. It consisted of representing a being or a thing or of expressing a concept by means of a metonymic series—that is, by building a set. This set could be enunciated in texts, or it could take material form during ceremonies. It unfolded in a range of groups of greater or lesser extent.

## INVENTORY

In certain cases, the extension of a list makes it evident that ritual actors intended to create the longest possible catalog. This happened during the Aztec Festival of Huey tozoztli (between April 13 and May 2, according to Broda 2000, 55), at the beginning of the rainy season. At that time, they celebrated the goddess who bore the name of the calendar round date Chicomecoatl, "Seven Serpent," and represented all the products of agriculture. A very long list identified by informants of Sahagún enumerates many varieties of maize, beans, amaranth, and chia:

It was said, it was indeed this Chicome coatl who made all our food—white maize, yellow maize, green maize shoots, black maize, black and brown mixed, variously hued; large and wide; round and ball-like; slender maize, thin; long maize [a long list of varieties of maize follows . . .]. White beans, yellow beans, red beans, quail-colored beans [a list of varieties of beans follows . . .]. Amaranth, the variety of amaranth called cocot, fine red amaranth seed [a list of varieties of amaranth follows . . .]. And also chia, white chia, black chia, wrinkled. [ . . . ] All these things, so they say, all of them they offered to [the goddess]. (*FC II*, 64–65, transl. Dibble and Anderson)

Evidently, the profusion of varieties mentioned in the discourse and effectively stacked in front of the image of the goddess met a ritual goal: to obtain fertility and abundant harvests. But this series of words and things could be summarized in the form of four major foods—maize, beans, amaranth, and chia—or the first of them as the doublet "maize-beans." From the point of view of a translator, if it were necessary to translate the list using a single conceptual word, in the manner of Arcimboldo titling his painting *Summer*, we would say "agricultural products."

Another collection of physical objects has been found in a ritual deposit exhumed by the archaeologists of the Great Temple of Tenochtitlan, constructed in the fifteenth century through the beginning of the sixteenth century. Ofrenda 125 contains 1,945 elements of animal origin belonging to a minimum of 1,264 individuals belonging to five *phyla*, ten classes, forty-six families, fifty-eight genera, and fifty-six species. These animals include two eagles and a canine, but most of them come from an aquatic environment. The authors of the publication summarize my proposal

about the inventory and conclude: “In Ofrenda 125 we would be confronted with a true inventory or exhaustive list. Thus, the presence of 55 different taxa of marine and freshwater animals would materially express the ‘aquatic world’ idea. In short we would have a canine literally immersed in an aquatic environment, which is significant in cosmological and eschatological terms” (López Luján et al. 2012, 31).

It could be hypothesized that the number of individuals and species gathered together to form the “aquatic world” set expressed the wealth of the world and sought to reinforce ceremonial efficacy, in the same way the profusion of agricultural products engendered hope for good harvests.

#### THE SHORT LIST

When ritual efficacy was not supported by quantity—stated or represented—a short list was sufficient to form a set. Let us take the example of a social group consisting of all female persons employed in the manufacture of salt gathered during the feast of Tecuilhuitontli (June 12–July 1, according to Broda 2000, 55), centered around the woman who embodied [impersonated] their goddess Huixtocihuatl: “all gather, adorn her [the *ixiptla*, or impersonator], the salt people, the salt makers: the old women (*ilamatlacah*), and the mature women (*yollocó cihuah*), and the maidens (*ichpopochti[n]*), and those who were maidens recently matured (*ichpopochchicacti[n]*)” (FC II, 93).<sup>2</sup> With this list of four categories of women, the informants of Sahagún wanted to express that absolutely all females in the craft group—with the exception of prepubescent girls—participated in the ritual. We could translate this series as “female.” It was expressed as much in a linguistic manner as it was embodied and theatricalized.

#### THE DIPHRASISM AND THE HEAD OF LIST

Often, the list is limited to two terms. Ángel María Garibay (1961, 117) gave the name “difrasismo” (diphrasism) to this well-known linguistic procedure, which also received the names “binomial,” “pair,” and “doublet.” It is thought to appear in ceremonial context in many Mesoamerican languages, including Nahuatl (Montes de Oca Vega 2004). In this language, as a simple and classic example of a diphrasism, we could cite “skirt, shift” (*in cueitl in huipilli*) to designate a woman and “hand, foot” (*in imac in iicxic*) to designate the human body (Dehoue 2011b, 165).

The earliest researchers (León-Portilla 1956; Garibay 1961) studied diphrasisms only in language. Recently, however, Mercedes Montes de Oca Vega (2013, 373–399) has pointed out the possibility of finding diphrasisms in images. Thus, for example, the town designated as “water-hill” (*atl tepetl*), war “water–burned earth” (*atl*

*tlachinolli*), warriors "eagles-jaguars" (*cuauhtli ocelotl*), authority "the mat-the seat" (*petlatl icpalli*), and other diphrasisms receive an iconographic expression in pictographic manuscripts of the time of the Conquest. Moreover, the archaeologists of the Templo Mayor have shown the existence of material diphrasisms. In Ofrenda Funeraria V of the House of Eagles, Leonardo López Luján located some burned duck bones and turkey wings, an eagle claw, and the axis, two premolars, and two tusks of a jaguar. After examining several hypotheses, the author recalled that in discourse, the diphrasism "teeth-nails" refers to the exercise of justice. Therefore, there is "the possibility that the raptor claws and jaguar tusks in Ofrenda V served as symbols of power for our personage" (López Luján 2006, I, 249). From my perspective and from what I have explained above, metaphors and metonymies represent a conceptual procedure, and it is therefore natural that they receive linguistic, pictorial, and material expression.

One additional question merits discussion, however. In general, researchers consider that the diphrasism is based on the "dualism of conception," a fundamentally Mesoamerican trait. While undeniable, this leaves unanswered the question of what to do with the series comprising either fewer than or more than two terms. This debate was begun years ago by Barbara Tedlock (1982, 189), who wrote apropos the Maya world: "Edmonson insists on the couplet as the sole form of Quiché [K'iche'] parallelism, but the present text contains clear exceptions including single phrases (without parallel), triplets and [...] parallel series of potentially indefinite length." Regarding the *Popol Vuh*, Dennis Tedlock (1985, 244) spoke of triphrasisms and cuatrophrasisms. Nevertheless, conversely, Montes de Oca Vega (2004, 228–229) rejects the use of terms other than diphrasism because she considers that series of three or four terms are always formed of doublets: "I think that it is more productive to maintain this idea of the pair and that what are presented are diphrastic chains, that is groupings of diphrasisms structured or united by pair upon pair." And to account for the odd series she adds: "The case of triphrasisms is special. At least in the case of Nahuatl a third term sometimes arises that accompanies a pair which is more established [...] However, I think that this third term more than being a part of the diphrasism is an agglutinator of the meaning, that is, it expresses the meaning of the two terms united in the diphrasism" (Montes de Oca Vega 2004, 228–229).

From my point of view, a diphrasism is a definition by extension based on a short metonymic series. The ability to summarize a lengthy metonymic series in a pair of terms certainly represented an ideal for a culture fond of the "dualism of conception." However, the diphrasism represents a procedure the same as a series of three terms (triphrasism), of four (cuatrophrasism), and of a longer list or inventory.

I propose that definition by extension is a spectrum that ranges from an inventory to a single term, a short series, and diphrasisms. For example, the very common

“skirt-shift” [*in cueitl in huipilli*] nominal diphrasism is a reduced metonymic series that refers to women through the listing of *two* of the components of their dress. But women could be designated through a longer list, as is the case in a document from the sixteenth century that lists the following *seven* words: skirt and shift [clothing], batten, the spindle whorl, loom bar, and cotton and the spinning whorl [instruments of spinning and weaving].<sup>3</sup> Another list, intended to define the newborn girl, contains *eight* elements: “the spinning whorl, the batten, the reed basket, the spinning bowl, the skeins, the shuttle [spinning and weaving instruments], her little skirt, her little shift [apparel].”<sup>4</sup> An illustration, on the other hand, depicts a list of *eleven* elements related to yarn and fabric (*FC VI*, fig. 30).

These examples show that inventories could be quite variable, not surprisingly since, as Emile Goblot (1918, 104) assumed, enumeration of the objects denoted by one word is impossible because they are countless: what is infinite cannot be exhausted. In other words, an inventory is always susceptible to extension, and for this reason the long lists designating “woman” are not identical. In contrast, abbreviation into a diphrasism usually takes a more stable form, as in shift-skirt for women. In this last example, the diphrasism is so rigid that it almost never arrives at being summed up by a single word that would in this case be “skirt” *or* “shift.” However, we will see in other cases that a single term employed as “head of list” sufficed to express the same sense as a diphrasism and an inventory. What follows will provide several examples of semantic range.

#### THE RANGE OF OBJECTS THAT DESIGNATE THE SACRIFICIAL VICTIM

The previous lines proposed that the semantic unit of ritual speech was not the word but the definition by extension of the metonymic series. Since metonymy is a kind of metaphorical procedure, that is, through image, it comes from a cognitive level deeper than language. Therefore, series can receive an expression as much oral as material, in the form of objects, gestures in space, and embodiment. As desired, series could receive greater or lesser extension, ranging from inventory to diphrasism and head of list. Whatever their breadth, series should be translated by the same synthetic term.

For further explanation of the functioning of series, we can take the example of a ritual semantic range from the custom of adorning a captive with various objects and ceremonial painting. It will be shown that the series was composed of nouns in its oral form and objects in its material form; further, it could be lengthened or shortened without changing the meaning.

The sacrificed warrior was the object of a ceremonial preparation because before being put to death he was covered with chalk and white feathers, he received red

face paint and a headdress of white papers, and a white sacrificial flag was placed in his hand (see, for example, *Codex Telleriano-Remensis* [1995], fol. 42v). This description represents the definition by extension of the sacrificial victim, that is, the enumeration of some of its most significant components.

Leaving aside the pair "flag-banner" (*pantli-tetehuitl*) designating elongated objects in paper that the warrior carried in his hand,<sup>5</sup> I will focus on adornments and body painting. The existence of semantic range is proven by the existence of several lists of variable extension.

Thus a description says of victorious warriors: "They covered their bodies [of the captives] with chalk; they had their paper breechclouts, their paper shoulder sashes, then their paper wigs. They decked their heads with feathers. They had their feather lip pendants; they were stained chili-red about the mouth; they were stained black in the hollows of their eyes."<sup>6</sup> In another text, the list is abbreviated and the sacrificial victim is described as "chalk, feathers, black, red, yellow ochre,"<sup>7</sup> that is, by means of four colors that refer to body painting, white being evoked by chalk and feathers. Increased list reduction leads to the diphrasism "chalk-feathers" (*tizatl ihhuitl*). Finally, it was possible to reduce the list to a single term, the head of the list, "chalk," as I am going to demonstrate with two cases of the ritual use of these materials. But what is important is that the translation of the word *chalk* or the diphrasism "chalk-feathers" by "sacrificial victim" allows the elucidation of the metaphorical meaning of the ritual. Without relying on this secure method based on metonymic meaning, symbolic interpretations could be very risky.

#### "TO TEST THE CHALK": REPRESENTING THE FIRST CAPTURE OF AN ENEMY

In a sentence, a transitive verb has a direct object noun, while in real life the action applies to a real object. The series "chalk-feather" represented an object complement or material set with the help of which several different rituals were constructed. Thus Katarzyna Mikulska (2015, 440–441) shows that, according to Hernando Alvarado Tezozomoc (2001), the fact that one sovereign would send a mixture of chalk with feathers to another served as notice before war. The ritual I describe below was based on another type of manipulation of the mixture.

The term *tizapaloa* ("to test the chalk") consists of a noun (*tiza(it)*, "chalk") and a verb (*paloa*, "to test, to greet"). It designated the ritual combat represented by warriors during the annual feast of Ochpaniztli (August 31–September 19, according to Broda 2000, 55). The fire priest deposited the mixture of chalk with feathers at a place called Coaxalpan: "And when it is deposited, the warriors are immediately released. They run quickly; here is seen who the true runners are. The one who arrives first grabs the feathers and gathers them; then [the feathers] are scattered,

they fly by the action of those who steal them, then they take off, they run quickly.”<sup>8</sup> With their fists full of the compound of chalk and feathers, the warriors left fleeing before the impersonator of the goddess Toci under the gaze of spectators who threw stones at all the runners (*FC* II, 125, 202; *HG* II, 167, 135).

This theatrical representation united a material set and an action. The first is the mixture of chalk and feathers that abbreviates the metonymic series of adornments of the sacrificial victims and therefore designates the sacrificial death that potentially represents the fate of warriors. The action staged is the race. It is known that pre-Hispanic war had as its objective the capture of enemies, and therefore it was vital to run quickly. It is also known that an avatar of Huitzilopochtli was the god Painal known for rapid running, like the warriors and the Sun; from Painal came the name of the warriors called *painani*. Thus while chalk and feathers designated the captive, the footrace signified that his capture was accomplished during the course of war. The word *test* or *greet* designated in a metaphorical way the footrace of the warriors. Indeed, it was a term applied to acts performed for the first time: for example, “test new pulque” meant to open the pot of freshly brewed pulque (*FC* I, 30, 49). Therefore, it can be concluded that “to test the chalk” was the ritual representation of the victorious battle of the warriors and was done with the intention of anticipating the capture of the enemy during the coming year.

TO SHOOT ARROWS INTO “PULQUE-CHALK” AND THEN  
DRINK IT: REPRESENTING THE CAPTURE OF AN ENEMY

Another ritual manipulation of the mixture of chalk with feathers was carried out in the final moments of the annual feast of Tozoztontli (March 24–April 12, according to Broda 2000, 55), putting an end to the warrior ceremonies that had begun during the previous Tlacaxipehualiztli festival. During the closing ceremony held at the house of a warrior who had captured an enemy, a man wore the dress and ornaments of a triumphant soldier. He performed a warrior dance before shooting his arrows against a pot of pulque and drinking the liquid (*FC* II, 60). The key to the interpretation of this ritual is the name given to the drink: “pulque-chalk” (*tizaocitli*). Pulque was a fermented drink from the juice of the agave and was white. Calling it “chalk”—also a white substance—created a metaphorical equivalence between the drink and the captive who, as we know, was designated by the abridged series in the diphrasism “chalk-feather” or “chalk” as head of list. Therefore, it could be thought that the man represented the victorious battle of the capturer in the form of dance.

“To test the chalk” and “to drink pulque-chalk” represent two types of actions performed on a physical substance that abbreviated the list of adornments of the sacrificed warrior. The first ritual made use of a mixture of chalk with feathers, but

the second used a drink characterized at a metaphorical level as chalk. In both cases, the mention of chalk provided the element designating combat and the capture of the enemy. The important thing is that the "chalk" did not imply "chalk" or "mixture of chalk and feathers" but instead "sacrificed" because it represented and replaced the list-inventory of the accouterments of the captive to be sacrificed that formed part of the definition by extension of this personage. Put another way, deciphering a binomial or a head of list requires discovering the series to which it belongs.

### THE OPERATIONAL CHAIN FOR THE LIGHTING OF FIRE

Parallel to the nominal series composed of nouns in language and objects in rituals, there were verbal series describing actions. They represented definition by extension of an activity described by the enumeration of its manifestations. These metonymic series unfolded in a range that could be extended to a greater or lesser degree, as will be shown in the example of the lighting of fire.

The Aztecs used fire on many occasions of everyday life and ritual—in the kitchen, baths, and *temazcal*; clearing land; in the extraction of salt and other products; and in the ceremonial burning of *copal* (according to *FC* and *HG I*, chapter 13). Aztec society did not have matches; therefore, there were only two methods of making fire: drilling a new fire and taking embers from an existing fire. Both options had a ritual character.

Fire drilling required following a precise operational chain expressed in Nahuatl descriptions by a series of verbs. The drilling stick was called *tlecuahuítl* (from "stick or wood," *cuabui-tl* and *tle-tl*, "fire"). It consisted of two parts, the board and the stick itself that the priest in charge of lighting the fire turned between his hands. This operation was known as "throwing the fire stick" (*tlecuauhtlaza*, *quitlaza tlecuahuítl*) or "making it turn" (*quimamali tlecuahuítl*). When the spark flew, it was said that "the fire stick falls" (*huetzi tlecuahuítl*); then the fire "took" when blowing on it (*pitza*, a verb meaning "blow" and "catch" fire) and finally, "it flared, burst into flames" (*xotla cueponi*). To conclude, it was placed (*tletlalia*) in a hearth, a brazier, or a torch (according to *FC VII*, 11, 25, 26, 27, 28).<sup>9</sup>

The extent of the list of verbs varied among texts, as we have seen was the case with any metonymic series. A series could appear in the texts of Sahagún quite fully, as in this example that brought together *five* verbs: "for a spark to fly, to catch fire, to flare, to blossom, to sprout" (*cueponi*, *huetzi*, *xotla*, *cuetlani*, *pitza*).<sup>10</sup> For its part, the description of the drilling of fire during the annual Festival of Izcaltli resorted to *four* verbs: "to throw the stick, for a spark to fly, to catch fire, to install the fire" (*tlecuauhtlaza*, *huetzi*, *pitza*, *tletlalia*).<sup>11</sup> More often, the series was summarized in the diphrasism "blowing/catching the fire, making the drill turn," that is, "it catches



fire, rotating it between the hands” (*pitza mamali*). It is apparent that the diphrasism stated the verbs in a different order from the operational chain in which the fire stick is first rotated between the hands (*mamali*) and then blown on so that it begins to catch fire (*pitza*).

Did this diphrasism exhibit any verbal productivity? We have seen that nominal series were quite productive of meanings, obtained by partnering with verbal, sometimes metaphorical forms, as in the example of “to test” or “to drink” chalk. The verbal diphrasism “blowing/catching the fire, making the drill turn” was associated with metaphorical nominal diphrasisms. Thus the expression “blowing/catching the fire, making the drill turn” // “divine water, burned-earth,”<sup>12</sup> a nominal diphrasism, represents the action exerted on the “divine water–burned earth,” a nominal diphrasism that designates war. Therefore, the association of the two diphrasisms meant the making of the new fire that initiated combat.

We find in the pictographic manuscripts several representations indicating that delivery of the new fire was represented by the diphrasism “blowing/catching the fire, making the drill turn” enunciated in Nahuatl (for example, in the *Map of Cuauhtinchan no. 2* [in Carrasco and Sessions 2007; according to Taube 2000, fig. 10.15]) and possibly other languages (figure 3.1) (*Codex Laud* 1966, 8; according to Taube 2000, fig. 10.15; *Codex Vindobonensis* 1992, 14): the gesture of turning the stick between hands (*mamali* in Nahuatl) occupies the center of the image, and the moment in which the spark that is blown on starts to shine (*pitza* in Nahuatl) is indicated by means of the smoke that emerges from the friction point. The same act could also be represented by means of the simple head of list term *turn the stick*, without an indication of smoke (*Codex Vindobonensis* 1992, 11).

In this way, definition by extension of lighting fire took greater or lesser extended forms or was reduced to a diphrasism and a simple head of list. Any term of the series of activities mentioned should be translated by the same synthetic word: “to light a fire.”

#### ELEMENTS BELONGING TO SEVERAL SERIES

In the nominal and verbal series presented above, each of the elements of a list conveys the sense of the set to which it belongs. What happens when the same element is part of two different lists? This is what happens with the term *flower* (*xochitl*), which brings together many symbolisms. This has been known from the time of Eduard Seler (1963, I, 28–119), who concluded his study of the *Codex Borgia* by saying that flowers designated either the blood of self-sacrifice or the female gender. My proposal is that it is possible to go beyond the limits of personal interpretations by using a method based on the search for metonymic series. This consists of listing





**FIGURE 3.1.** The fire drill (*Codex Laud* 1996, 8; according to Taube 2000, fig. 10.15). Drawing by Danièle Dehouve.

the series in Nahuatl that contain the term *flower*; to consider them as definitions by extension, which allows the decipherment of their meaning; and finally, to decide according to the context to which series the “flower” being examined belongs at any given time. It is true that this method is particularly suitable for Nahuatl texts and for manuscripts produced in this language.

The term *flower* belonged to two series. The first was expanded in the “flower tobacco” diphrasism and in the inventory “flower, tobacco, beverage, food, loincloth, cape, weaving, clothes, land, house.”<sup>13</sup> As usual, the fluctuating character of the inventory and the fixed character of the diphrasism are shown. But in any case, the series came from the gifts the triumphant warriors received from their sovereign. Indeed, when men returned from battle with captives for sacrifice, they received various kinds of luxury goods: flowers and tobacco, beverage and food; certain kinds of woven items—loincloths, capes, clothes—carrying specific designs based on the military rank achieved; and, above all, “house and land,” that is, a palace surrounded by plots of land with peasants to cultivate them and with rights to receive tribute. Therefore, the series designated *honors achieved in war*. By contraction, the simple fact of giving, mentioning, or depicting an object situated at the head of the list (flowers or tobacco) expressed the meaning contained in the complete series: “he is a warrior, he has taken captives and deserves to be honored.”

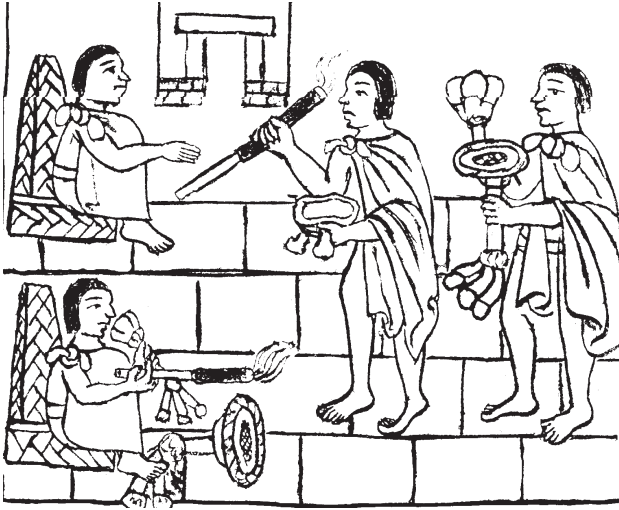
With the exception of land and houses that had already become the property of the nobles, the set of flowers, tobacco, food, and luxury goods was presented to great warriors during festivities organized by merchants, weddings, royal enthronement,

and the annual celebrations of the nobility such as Tlacaxipehualiztli. These gifts were also offered to certain god warriors—Quetzalcoatl, Huitzilopochtli, and Toci—and they clothed and adorned with these items the king and impersonators of the gods.<sup>14</sup> The description of a party held by a merchant returning from an expedition (*FC IX*, 34–35, analyzed in Dehouve 2014a) shows how the series materialized in actual fact. Servants arrived carrying a tube of *tobacco* for smoking (*yetl*) that was placed in the right hand of the guest, then a *floral bouquet* (*xochitl*) was placed in his left hand (figure 3.2), and finally, they offered him their *food* (cups of chocolate and mole with tamales) and gifts of clothing.

The diphrasism “flower-tobacco” considered in isolation transmitted a further metaphorical meaning: *to represent war*. Indeed, the guests took the tube of tobacco in their right hands, as if it were a dart, and the flower in the left hand, as if it were a shield, and set to inhaling the tobacco smoke and the scent of flowers (*FC IX*, 34–35).<sup>15</sup> The same metaphor appeared in other types of ceremonies. When the merchants of slaves destined for sacrifice sold men in the marketplace, they dressed them up as warriors. Indeed, after dressing them in warrior attire, “they gave them a flower-shield and placed in their hand[s] a good tobacco tube. [The slaves] go smoking [tobacco], go smelling [flowers], there in the plaza, they go about dancing.”<sup>16</sup> Destined to play the role of warriors in the sacrifice even if they were not, these slaves were dressed as such and imitated warfare through metaphorical action. Another case is provided by the description of the king. We know that the Mexica sovereign was conceived as the paradigmatic warrior of the kingdom. When he danced, he went carrying in his hands a flower and a tube of tobacco because they expressed metaphorically that war was his “permanent occupation.”<sup>17</sup> In general, the rulers of the central highlands are represented carrying flowers and a tobacco tube in their hands (see, for example, *Codex Ixtlilxochitl* 1976, fol. 107r and 108r). For the same reason, during the feast of Toxcatl dedicated to the warrior god Tezcatlipoca, the impersonator of the deity danced smoking tobacco and smelling a flower (*FC II*, 68).

Flower and tobacco are lent to another metaphorical construction designating “*fame gained in war*.” As smoke and perfume rose into the sky and were broadcast in the air perceptibly by sight and smell, so spread the fame of the great warrior: “it was as if his flowers and his tobacco were disseminated throughout the country.”<sup>18</sup>

Thus the fundamental metonymic series (from flower and tobacco to land) denoted the list of goods merited by the warrior. Through their metaphorical properties, the tobacco tube and flower led to some additional meanings: the representation of combat and the fame that was gained thereby. Therefore, the series headed by the diphrasism “flower-tobacco” can be considered a definition by extension of “*warrior prowess*.” As a result, any isolated element—such as flower,



**FIGURE 3.2.** The flower of the series “warrior prowess” (gift of tobacco and flower, Sahagún 1979, IX, fig. 28). Drawing by Danièle Dehouve.

tobacco, or clothing—considered in the context of this series should be translated by this concept.

The second series that starts with “flower” is “flower, song, joy” (*xochitl in cuicatl paquiliztli*). A fourth term refers to the “game of the sexes.”<sup>19</sup> This is a short series that apparently fails to combine more than these four terms and indicates clearly *rejoicing with music, song, and dance*.<sup>20</sup> According to Miguel León-Portilla (1956, 143), the diphrasism “flower-song” meant “poem,” which is not surprising given that poems were accompanied by songs and dances.

Knowing that the term *flower* could be translated as much by *warrior prowess* as by *rejoicing with music*, how should one choose between the two meanings? In verbal and pictorial expressions, the flower that belongs to the series “flower-tobacco-gifts” with a warrior connotation appears accompanied by at least one of these terms. Thus figure 3.2 depicts the ritual of gifting tobacco and flowers during a banquet offered by the merchants. The first server arrives carrying the tobacco tube and the second the flower. In the lower scene, the great warrior inhales tobacco smoke and the scent of the flower. The same gifts (a bundle of tobacco tubes and various floral arrangements) ready to be given to the guest are illustrated in Sahagún (1979, IX, fig. 33). A lord of Texcoco, Quauhtlatzacuilotl, is depicted with a tube of tobacco in one hand and a flower in the other (*Codex Ixtlilxochitl* 1976, fol. 107r), and the king of Texcoco, Nezahualpilli, is shown carrying only floral compositions in both hands, which means that flower alone (considered in this case as head of list) has the same meaning as the diphrasism “flower-tobacco” (*Codex Ixtlilxochitl* 1976, fol. 108r).



**FIGURE 3.3.** The flower of the series “rejoicing with music” (the *trecena* 1-Flower, *Codex Borbonicus* 1899, 4). Source: Assemblée nationale, Paris.

Finally, a tube of tobacco and a floral arrangement are given to Huitzilopochtli, who as a great warrior god received them on his pyramid (see Sahagún 1979, IX, fig. 30; *FC* IV, 78, chapter 21).

The second series, rejoicing with music, is illustrated pictorially in figure 3.3, which represents the prognostications of the fourth *trecena* of the divinatory calendar, 1-Flower (*Codex Borbonicus* 1899, 4). On the right of the page, the god Huchuecoyotl (“Old Coyote”) dances in front of a musician on the left.



Huehucoyotl carries flowers in his pectoral and a flower in one hand that is recognizable as the flower called *xiloxochitl* in Nahuatl ("flower of the young ear of maize"), known in Spanish as "*cabello de ángel*," *mocoque* o *clavellina*, for which the botanical name is *Pseudobombax ellipticum*. In the other hand he carries gourd rattles adorned with a stylized flower. In front of him, the musician bears flowers *Pseudobombax ellipticum* in his pectoral and a stylized flower in his scroll denoting singing. Thus the items in the list "song and joy" are represented through a series of actions and of instruments indicating song and dance accompanied by flowers: the gourd rattles marked with the sign of the flower represent music; singing is expressed by means of the volute and scroll marked with the sign of the flower; and dance is signified through the posture of Huehucoyotl bearing different flowers. In other words, the page offers a definition by extension of *rejoicing with music* represented pictorially, in which the "flower" is present to complete the series that includes music, singing, and dancing.

Another illustration (Sahagún 1979, VIII, fig. 69) offers the figurative representation of a group of singers and dancers, the only distinctive feature of the latter being that they carry in their hands various kinds of floral arrangements. So in ritual reality, the musicians and dancers were literally covered with flowers, and this insistence found an echo in the texts of the poems that were filled with names of flowers. Regarding the *Cantares Mexicanos*, Garibay (1965, XXII–XXIII, trans. Jerome A. Offner) writes: "For the Nahuatl poet everything is flowers [ . . . ] It is seen in the variety that is provided in the text and the difficulty of knowing exactly what the poet is trying to express. There are around fifty flowers mentioned in these poems [ . . . ] In each one of them we find problems similar to what I just expressed."<sup>21</sup>

The problem referred to by Garibay is the difficulty in elucidating the meanings transmitted by different flowers. This is understandable: the flower not only belonged to the metonymic series of musical rejoicing but was its essence. As a consequence of this metonymical construction, "flower" lent itself to an unending search for metaphors of every kind to express everything needed in the context of the songs.

The reader will recognize that figure 3.3 presents various images of a stylized flower located on representations of a maguey spine: one of them is found on the upper left of the page and another on the lower left. This "flower" belongs neither to the first series nor to the second that I deciphered above. It responds to a third meaning based on the use of "flower" in composition (and not in series) as *qualifying* a noun. In this case it is *xochiatl* [*xochi (tl) -a(tl)*], "flowery liquid," synonymous with *teoatl* [*teo(tl) -a(tl)*], "divine liquid," which refers to blood (Wimmer 2004, "*xochiatl*"). Its sense was near to *xochimicqui* ("flowery death"), which meant the sacrificial victim (Wimmer 2004, "*xochimicqui*"), and *xochiyaoyotl* ("the flowery war"),

designating the combat carried out to capture men for sacrifice. The representations of maguery thorns extended by a stylized flower show that they are covered with the blood of people who have practiced autosacrifice.

We will see later a fourth meaning of the word *flower*, and even so, this analysis of the meanings of the term will probably not exhaust the polysemy of the word that was so very productive of symbolism. What I decided to show was that meanings depended on *context* and that the metonymic series in which “flower” was found offered a very precise way of expressing this context.

### INTERTWINING SERIES

We have just seen that an item could belong to two distinct series. The Nahuatl texts provide further examples of the same phenomenon that can produce two intertwined series.

As mentioned, the “drilling the fire” series included several verbs that, in its abbreviated form, were summed up in two words: making the drill turn // blowing-catching the fire (*mamali-pitza*). The series was completed with other verbs, “throw the stick, blossom, sprout, install the fire,” that made explicit the fact that there was a fire and nothing else. However, the two verbs making the drill turn // blowing-catching the fire (*mamali-pitza*) were also actions of goldsmiths and therefore formed part of the series of the trade of goldsmithing. In this exact context, the verb *mamali*, “to make turn between the hands,” meant “perforate” or “pierce” and meant drilling metal or stone with a sharp end: “they pierced [gemstones], perforated them with a metal tip.”<sup>22</sup> The verb *pitza* (“blow” or “catch” when referring to a fire) indicated metal casting, as in the expression “cast gold,” *tlapitzalli teocuitlatl*. The diphrasism *mamali-pitza* therefore described the making of jewelry. To specify and differentiate this from the drilling of fire, the term *pierce*, *coyonia*, or the names of jewels were added to the pair of verbs.<sup>23</sup> The word *blow* (*pitza*) belonged to a third series that involved music. To blow into a wind instrument meant to sound or play it. This sense appears clearly when the verb is followed by a series of musical instruments, for example, “blowing in [marine] conch shells and reed flutes.”<sup>24</sup>

If we present the three series vertically (table 3.1), we see that each one comprises a definition by extension clear and distinct from the others: in the fire series, the set of actions of lighting a fire means drilling; in the goldsmithing series, the action of spinning (a tip), to perforate and pierce, designates the working of metal; lastly, blowing in wind instruments belongs to the music series. If we consider, however, what happens in the horizontal direction, we see that a new series appears, across, meaning “blowing,” and it brings together all the kinds of blowing existing in the

**TABLE 3.1.** Intertwining among three metonymic series

<i>Fire Series</i>	<i>Goldsmithing Series</i>	<i>Music Series</i>
MAKING TURN <i>mamali</i>	MAKING TURN <i>mamali</i>	
BLOWING-CATCHING THE FIRE <i>pitza</i>	CASTING AND MELTING <i>pitza</i>	BLOWING <i>pitza</i>

drilling of fire, goldsmithing, and music. Thus a new definition by extension arises, able to be activated as needed in ritual.

The theoretical possibility of creating interwoven series is worth mentioning because it creates an effect derived from the definition by extension. In effect, the definition by "comprehension" isolates the meaning of each word and element and makes it something unique. Conversely, the definition by extension allows the intertwining of elements of different series and therefore the creation of new meanings.

#### SECOND-LEVEL SERIES

So far I have considered no more than a few descriptive metonymic series. These may be associated following metaphorical lines to create a "second-level" series. I will take the example of one that brought together these six elements: *sunrise, childbirth, hatching of a bird, the lighting of fire, the blossoming of a flower, and perforation of a jewel*. If a metonymic series is a definition by extension, the question is what defines it and which synthetic term to use to translate it. For this purpose, it will be necessary to take into account the context of the use of the series and the exact meaning of each of its terms.

This series was used to refer to the enthronement of the new king: "Now, right now, the Sun has warmed, has extended itself, has shown itself [*sunrise*], it was blown on, was drilled the jade, the turquoise, the bracelet [*perforation of the jewel*], it lived, it was born [*childbirth*], it flowered, it blossomed [*birth of fire or the blossoming of a flower*], the pine, the light came to stand [*lighting of a torch*]" (FC VI, 17, my translation).<sup>25</sup>

On another occasion, a similar series designated purification of the guilty following a misdeed. After inflicting on him various mortifications followed by a bath, the ritual specialist said to the man: "Now, our Lord deigned to cause that there be heat, be light [*sunrise*], now you come to extend, you come to make the sun rise [*sunrise*], now again you emerge as a child, as an infant, again you become a little boy

[*childbirth*], you become a young parrot [*hatching of a bird*], a jade, a turquoise [*jewel drilling*], you blossom, you put out sprouts [*lighting of fire, flower blossoming*], you hatch from the egg [*hatching of a bird*], you are born on the surface of the Earth [*childbirth*]” (FC VI, 32, my translation).<sup>26</sup>

These six elements were extracted from first-level series each composed of a large number of verbs:

- The complete series of the Sun includes: “the Sun has warmed, has spread, has shown itself,” “there is heat, there is light,” “you come to extend, you come to make the sun rise,” *otonac, omomanaco, tona, thathui, in tonatiuh otlanez, tic-hualmana, tic-hualquixtia in tonatiuh*.
- The childbirth series includes: “it came to life, it was born,” “you emerge as a child, as an infant, you again become a little child,” “you are born on the surface of the Earth,” *oyol, otlacat, tipilquiza, ticonequiza, occepa iuhquin tipiltzintli timochihua, titlacati in tlalticpac*.
- The egg hatching series includes: “you are a young parrot,” “you emerge from the egg,” *in titoztli, titlapani*.
- The lighting of fire and the blossoming of the flower series includes: “It flowered, it sprouted,” “you blossom, again you bloom,” *oxotlac, ocuepon, ticueponi, occepa yancuican tixotla*.
- The jewel piercing includes: “the jade, the turquoise, the bracelet were blown on, were drilled,” “you become a jade, a turquoise,” *opitzaloc omamalihuac in chalchihuitli in maquiztli in teoxihuitl, tichalchihuitl, titeoxihuitl timochihua*.

Some of these first-level series share common elements.<sup>27</sup> Nevertheless, this semantic proximity is not enough to explain the mechanism of the formation of second-level series. To achieve this, it was necessary to build an intertwined series. On the vertical axis, the verbs detail the entire timing of the actions referred to in each of the six basic series: the solar cycle; childbirth; the hatching of birds, fire, flowers; and goldsmithing. In the horizontal direction, new traversing series are constructed, which unite among each other a particular instance of each basic series. The horizontal, or second-level, series are the axis of creation and birth (table 3.2).

Let’s start with the vertical solar cycle series. The solar cycle comprised two moments: first, the middle of the night, *yohualnepantla*, which corresponded to 1:00 or 2:00 a.m. (Dehoue 2014b, 92) and designated the nocturnal creation of the new day; and second, the aurora at sunrise, that is, the moment of the birth of the sun. In the childbirth series, human reproduction starts with the first step (conception [*otzti*] and for birds with the release of the egg [*tetia, tlatlaza*])—which correspond to creation—and then proceeds with the



**TABLE 3.2.** The creation of second-level series by intertwining among six first-level series

<i>Solar Cycle Series</i>	<i>Childbirth Series</i>	<i>Bird Hatching Series</i>	<i>Fire Series</i>	<i>Flower Series</i>	<i>Goldsmithing Series</i>
The night divides	To conceive	Laying egg	Making turn Blowing/ catching	It buds	Making turn Melting and casting
<i>xelibui</i>	<i>otzti</i>	<i>tetia, tlatlaza</i>	<i>mamali pitza</i>	<i>xelibui celiya itzmolini</i>	<i>mamali pitza</i>
<i>Creation Axis</i>					
The sun comes up	It is born	It hatches, it breaks the shell	It flares, bursts into flames	It blossoms	Making turn Melting and casting
<i>tona</i>	<i>yoli</i>	<i>tlapani</i>	<i>xotla</i>	<i>xotla</i>	<i>mamali</i>
<i>momana</i>	<i>tlacati</i>		<i>cueponi</i>	<i>cueponi</i>	<i>pitza</i>
<i>tlathui</i>					
<i>Birth Axis</i>					

second step (birth). The operational chain for lighting fire starts by “making turn, blowing/catching”—creation time—before flames are produced and the hearth is established—moment of birth. The same can be said of the formation of the flower, which starts by the swelling of the bud—creation—and continues with blossoming—birth.<sup>28</sup> Finally, the jewel is formed following an operational chain whose terms are reduced to two (making turn, melting and casting), intermingling the processes of creation and birth.

In this way, the six vertical first-level series give way to two horizontal second-level series: creation and birth. The series I have detailed above correspond to the transverse axis of birth. In effect, the chosen moments do not refer to deep night sleep, the conception of a child, egg laying, fire drilling, or the swelling of a bud, which would have meant that the series referred to the act of creation and procreation. Conversely, they list the moments of the emergence of the phenomenon—sunrise, childbirth, and bird hatching; the outbreak of flames; the emergence of a flower—which makes it possible to assert that the series refers to *the emergence of a new being at the beginning of his development cycle*. For this reason, it is used in the context of the enthronement of a new sovereign and the purification of the guilty, two events that are assimilated to a metaphorical birth because to be young is to be pure. Thus second-level series lend themselves to metaphorical games on top of first-level metonymic series.

## CONCLUSIONS

Although we may have the impression that in language and Aztec ceremonies images are mixed and confused without order, I am convinced that symbols were built following precise rules. Putting them into evidence would have the advantage of allowing a secure decipherment, escaping the now frequent overinterpretation. The procedure examined here refers to the metonymic series that conform to “definition by extension,” which designate a thing, a being, or an act by means of the enumeration of its components or manifestations. Series exist in language (in words), in material form (in objects), and theatricalized (in actions). They can be nominal (if they include nouns or objects) or verbal (if they include actions). These series have a greater or lesser extension, forming a range that begins with a detailed inventory that is reduced to a single term or a diphrasism. It is important that any word series convey the meaning of the series and not that of itself. Therefore, decoding a word or a binomial requires discovering the series to which it belongs and elucidating its meaning.

Among the examples detailed above, one clearly shows the importance of considering the word or thing within the framework of its series. “Flower” was a very polysemic object, but its different symbolisms remained carefully distinguished. I have revealed four of their meanings. The flower of the series “flower-tobacco-food-clothing” meant “warrior prowess.” The flower series “blossom, song, joy” meant “rejoicing with music.” The flower that we translate with “flowery” and used in composition to modify another noun encompassed the field of sacrifice and self-sacrifice. Finally, a last meaning came from the verb “to blossom”: the opening of the flower corolla came to be the equivalent of the sun, of childbirth or of bird hatching, the bursting out of flame, and the making of a jewel, which comprised the “birth” series.

The limits of this chapter did not allow me to detail the procedures derived from the metonymic series. I limited myself only to showing that nominal series can be transformed by the addition of a metaphorical verb (as in the ritual “to test // the chalk”) and verbal series can be applied to a metaphorical word (like “blowing-catching the fire, making the drill turn // divine water–burned earth.”) Another important effect comes from the ability to intertwine the elements of several different series, thus creating a new transverse series I called “second-level” series with metaphorical meaning. The association of metaphor with metonymy opened the way to many other procedures that will require listing in the future.

This work has been founded in the Nahuatl language, and pictorial representations have only been gathered to complement the word series studied in the texts of Sahagún. However, many codices are read in languages other than Nahuatl, and I do not think one should seek a term-by-term translation between words and images. On the other hand, I think codices ordered their graphic elements to form

in a visual way metonymic series of definition by extension. Thus the method followed above for the decipherment of the aforementioned symbols could be applied profitably to the symbols represented, continuing with the effort of elucidating the rules of composition of "image swarms."

#### NOTES

1. L'extension d'un concept étant un nombre infini de sujets singuliers, dont la compréhension est infinie, échappe aux prises de l'intelligence. On ne pourrait la connaître que par énumération; or l'énumération de tous les sujets singuliers est impossible parce qu'ils sont sans nombre. Au contraire, la compréhension d'un concept peut être construite au moyen d'autres concepts en nombre limité (Goblot 1918, 104).

2. I return to the translation of Dibble and Anderson at the end of the passage cited, but I offer my own for the beginning.

3. "I extend the skirt, blouse around one, I place around one the weft sword, the loom bar, to one's hand I fasten the cotton, the spindle." Tepan niczoa in cucitl, in huipilli, auh tepan nicteca in tzotzopaztli, in malacatl, in tezacatl, temac noconpiloa in ichcatl, in malacatl (Olmos 1875, cap. 8, 218). In this citation and all that follow I use my own standardized orthography. The series signifies "to marry a boy"; the three verbs "place around/extend/fasten" allude to marriage; the nouns designate the woman as articles of clothing and weaving instruments.

4. in malacatl, in tzotzopaztli, in tanahtli, in tzahualcaxitl, in cuahtzontli, i [n] xiyotl, icueton, ihuipilton (*FC VI*, 201, trans. Dibble and Anderson). These objects, along with others, are depicted on *FC VI*, fig. 30.

5. For a detailed study of this diphrasism, see Mikulska (2015, 445–454).

6. Quintzahuiyah, im aamamaxtli, im amaneapanal, nima ye im amazon, quinquapotoniah; im ihuitenzac, motenchichiloah, mixtentilcomoloah (*FC II*, 113, trans. Dibble and Anderson).

7. Tizatl, ihhuitl, in tlilli, in tlapalli, in tecozahuitl (Olmos 1875, cap. 8, 213, my translation).

8. Auh in oquiman, niman ic ehuah in tiacahuan, cenca motlaloah, cenca totocoah, huel uncan neci in painani in tlaezani: in aquin yacattiuah, quimotzototiquiza in ihhuitl: niman ic moloni, niman ye ic ipan onnetepelhualo in quinamoyah in ihhuitl, niman ic quiztimani, huel motlaloah (*FC II*, 125, my translation).

9. The expressions "throw the fire stick" and "the fire stick falls" are symbolic; they designate, respectively, putting the fire stick into a rotational motion and making the first spark.

10. "When a little spark appeared, when already it was blown on, already it caught, finally it blossoms and sprouts," in ihcuac oquenteltzin huel huetz, in omopitz, in oxotlac zatepan ic cuetlani, cueponi (*FC VII*, 28, my translation).

11. “the fire stick was thrown. When it caught, immediately they blew on it and then installed the fire,” *tlecuauhtlaza*. *Auh in ohuetz tletl, niman ye ic quipitza, mec tletlalia* (*FC* II, 159, my translation).

12. “[The fire catches] // [to make war],” *Ca mopitza ca momamali in teoatl tlachinolli* in (*FC* VI, 11, my translation).

13. “And the wealthy received //the flowers, the tobacco//, //the loincloth, the cape//, //the weaving, the clothes//, they will be worthy of //the land, the house//; and the wealthy received all kinds of //drink and food//.” *Auh in amiximati oquimahuizoqueh //in xochitl, in yetl//, //in maxtlatl, in tilmahtli//, //in cuachtli, in quemitl//, auh //in tlalli in calli// in oquimahuizoco; auh in amiximati oquimahuizoqueh //in atl in tlacualli// in nepapan* (*FC* VI, 106). “[Our lord, Tezcatlipoca], through him are produced //the flowers, the tobacco//, //the loincloth, the cape//, he causes that they be filled //the land, the house //.” [Totecuihyo] in *icenuhic mochihua //in xochitl, in yetl//, //in atl, in tlacualli//, //in maxtlatl, in tilmahtli, in quemitl//, in mochi quicemahci //in calli in tlalli//* (*FC* VI, 72, my translation).

14. Festivals of the merchants (*FC* IV, 122, IX, 34–35), weddings (*FC* IV, 129), royal enthronement [*FC* IV, 88 (2)], gift to Huitzilopochtli (*FC* II, 108, IV, 78), to Quetzalcoatl (*FC* IV, 29) and Toci (*FC* II, 111); as attire of the king (*FC* VIII, 28) and of impersonators of the gods (*FC* II, 68, IX, 45, 59).

15. This is the summary of a more complex ritual. For details, see Dehouve (2014a).

16. *Quinmacah chimalxochitl: ihuan cualli in yetl inmac quinquiliah, tlahlahchichintinemih, tlahnecutinemih in tianquizco, oncan mihtotitinemih* (*FC* IX, 45, my translation).

17. *Ineixahuil tlahtoani* (*FC* VIII, 28, my translation).

18. *Iuhquin centlalli mantiuh in ixochiuh in iiyeh* (*FC* II, 68, my translation); see also *FC* X, 80, IV, 78. “Flower, tobacco” means “fame” in these texts.

19. *Paquilizxochitl, ahhuializxochitl* (*FC* VI, 13).

20. “It is devoted entirely to singing and rejoicing,” *Huel in cuicatl in paquiliztli ihuan quimocuitlahuia* (*FC* IV, 23, my translation).

21. Para el poeta náhuatl todo es flores [...] Es de ver la variedad a que se presta el texto y la dificultad de saber con exactitud qué intenta decir el poeta. Hay unas cincuenta flores citadas en estos poemas [...] En cada una de ellas hallamos problemas similares al que acabo de exponer (Garibay 1965, XXII–XXIII).

22. *Inic quicoyoniah, inic quimamalih tepoztlacopintli* (*FC* IX, 81, my translation).

23. For the verb *coyonia*, see the previous note. For names of jewels: “were blown on, were [fire]-drilled, the jade, the turquoise, the bracelet,” *ca opitzaloc omamalihuac in chalchiuhtli in maquiztli in teoxihuilit* (*FC* VI, 17, my translation).

24. *Mopitza tecciztli ihuan acatecciztli* (*FC* II, 88, my translation).

25. In *axcan: at ie nellaxcan otonac, omomanaco in tonatiuh otlanez: ca opitzaloc omamalihuac in chalchiuhtli in maquiztli in teoxihuilit oyol otlacat, oxotlac, ocuepon, omoquetzaco*

in ocotl, in tlahuilli (*FC VI*, 17). The meaning of the metaphors is indicated in parentheses. The king was called a torch because he illuminated his subjects.

26. Ca axcan tona, tlathui quimochihuilia in totecuyo, axcan tic-hualmana, tic-hualquixtia in tonatiuh, axcan ocepa tipilquiza, ticonequiza: ocepa iuhquin tipiltzintli timochihua in titoztli, tichalchihuitl, titeoxihuitl timochihua, ticueponi: ocepa yancuican tixotla, titlapani, titlacati in talticpac (*FC VI*, 32, my translation). The meaning of the metaphors has been placed in parentheses. The *toztli* (*Amazona ochrocephala*) is a parrot that changes plumage as it becomes an adult: its head, covered with green feathers at birth, becomes yellow as it grows (*HG XI*, 631). These two colors convey the sense of purity with them.

27. "You are born as a child" and "you hatch as a bird" are associated in such a way as to make it impossible to know if one or the other is being spoken about ("you hatch from the egg, you are born on the surface of the earth"). The lighting fire series is close to the piercing of jewels in that they both contain the verbs "making turn, blowing/catching" (*mamali pitzá*), as mentioned above. The lighting fire series also has elements in common with the blossoming of flowers: *xotla cueponi* means it flares, bursts into flames in the first case, blossoms in the second. In addition, the hatching of the bird, the blossoming of the flower, and the emergence of the flame are accompanied by a sound that explodes: the bud bursts (*tlatzini*), the bird breaks its shell (*tlapani*), and the flame explodes (*xotla cueponi*) (see Wimmer 2004, *cueponi, xotla, tlapani*; Molina 1966 [1571], 329, *cueponi*: "when a roasted chestnut explodes"; *FC V*, 191, XI, 53, XI, 113, 116, 211). The series are associated through the multiple meanings of these words in Nahuatl.

28. The meaning of the blossoming flower as birth is present in the image of Tlazolteotl (*Codex Borgia* 1963, 74, and *Codex Vaticanus B* 1993, in Mikulska 2008, 103).

#### REFERENCES

- Alvarado Tezozomoc, Hernando. 2001. *Crónica mexicana*. Ed. Gonzalo Díaz Migoyo and Germán Vázquez Chamorro. Madrid: Dastin, Crónicas de América.
- Broda, Johanna. 2000. "Ciclo de fiestas y calendario solar mexicana." *Arqueología mexicana* 7 (41): 48–55.
- Carrasco, David, and Scott Sessions, eds. 2007. *Cave, City, and Eagle's Nest: An Interpretative Journey through the Mapa de Cuauhtinchan no. 2*. Albuquerque: University of New Mexico Press.
- Codex Borbonicus*. 1899. *Codex Borbonicus: Manuscrit mexicain de la Bibliothèque du Palais Bourbon (Livre divinatoire et rituel figuré)*. Facsimile, 1899. Ed. Ernest Théodore Hamy. Paris: Ernest Lédoux.

- Codex Borgia*. 1963. Ed. Eduard Seler, trans. Mariana Frenk. 3 vols. Mexico City: Fondo de Cultura Económica.
- Codex Ixtlilxochitl*. 1976. Bibliothèque nationale de Paris, Ms. Mex. 65–71. Reproduction. Graz: Akademische Druck- u. Verlagsanstalt.
- Codex Laud*. 1966. Oxford, Bodleian Library, Ms. Laud Misc. 678. Ed. Cortie [*sic*] Cortie. Burland. *Codices Selecti: Phototypice impressi*, vol. XI. Graz: Akademische Druck- u. Verlagsanstalt.
- Codex Telleriano-Remensis. Ritual, Divination, and History in a Pictorial Aztec Manuscript*. 1995. Ed. Eloise Quiñones Keber. Austin: University of Texas Press.
- Codex Vaticanus B*. 1993. *Códice Vaticano B 3773*. Ed. Ferdinand Anders, Maarten Jansen, and Luis Reyes García. Graz: Akademische Druck- u. Verlagsanstalt.
- Códice Vindobonensis Mexicanus I*. 1992. Ed. Ferdinand Anders, Maarten Jansen, and Gabina Aurora Pérez Jiménez. Graz, Madrid, and Mexico City: Akademische Druck- u. Verlagsanstalt, Sociedad Estatal Quinto Centenario, and Fondo de Cultura Económica.
- Dehoue, Danièle. 2007. *La ofrenda sacrificial entre los tlapanecos de Guerrero*. Mexico City: Plaza y Valdés, Universidad Autónoma de Guerrero, Instituto Nacional de Antropología e Historia, and Centro de Estudios Mexicanos y Centroamericanos.
- Dehoue, Danièle. 2009. “El lenguaje ritual de los mexicas: hacia un método de análisis.” In *Image and Ritual in the Aztec World: Selected Papers of the “Ritual Americas” Conference*, ed. Sylvie Peperstraete, 19–33. Oxford: BAR International Series 1896.
- Dehoue, Danièle. 2011a. “Analogía y contigüidad en la plegaria indígena mesoamericana.” *Itinerarios* 14: 153–184.
- Dehoue, Danièle. 2011b. *Relatos de pecados en la evangelización de los indios de México*. Mexico City: Centro de Investigaciones y Estudios Superiores en Antropología Social.
- Dehoue, Danièle. 2013. “Las metáforas comestibles en los rituales mexicanos.” *Les Cahiers ALHIM* 25, special issue: *De l’âtre à l’autel: Nourritures rituelles amérindiennes* (Mexico, Guatemala). <http://alhim.revues.org/4540>.
- Dehoue, Danièle. 2014a. “Flores y tabaco, un difrasismo ritual.” *Revista Inclusiones* 1 (2): 8–26.
- Dehoue, Danièle. 2014b. *El imaginario de los números*. Mexico City: Centro de Investigaciones y Estudios Superiores en Antropología Social.
- FC*, see Sahagún. 1950–1982. *Florentine Codex*.
- Garibay, Ángel María. 1961. *Llave del náhuatl*. Mexico City: Porrúa.
- Garibay, Ángel María. 1965. *Poesía Náhuatl, II, Cantares mexicanos: Manuscrito de la Biblioteca Nacional de México*. Mexico City: Universidad Nacional Autónoma de México.
- Goblot, Emile. 1918. *Traité de logique*. Paris: Librairie Armand Colin.

- HG, see Sahagún. 1956. *History of the Things of New Spain*.
- Kammerer, Paul. 1919. *Das Gesetz der Serie*. Stuttgart: Deutsche Verlag-Anstalt.
- Kövecses, Zoltán. 2010. *Metaphor: A Practical Introduction*. Second ed. Oxford: Oxford University Press.
- Lakoff, George, and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- León-Portilla, Miguel. 1956. *La filosofía náhuatl estudiada en sus fuentes*. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
- Le Petit Robert: Dictionnaire alphabétique et analogique de la Langue Française*. 1978. Paris: Société du Nouveau Littéré.
- López Luján, Leonardo. 2006. *La casa de las águilas*. 2 vols. Mexico City: Consejo Nacional para la Cultura y las Artes, Instituto Nacional de Antropología e Historia, and Fondo de Cultura Económica.
- López Luján, Leonardo, Ximena Chávez Balderas, Belem Zúñiga-Arellano, Alejandra Aguirre Molina, and Norma Valentín Maldonado. 2012. "Un portal al inframundo: ofrendas de animales sepultadas al pie del Templo Mayor de Tenochtitlan." *Estudios de Cultura Náhuatl* 44: 9–40.
- Mauss, Marcel. 1974 [1923]. "Sur la notion de participation chez Lévy-Bruhl [1923]," in *Œuvres* II, 130–131. Paris: Les Éditions de Minuit.
- Mikulska, Katarzyna. 2008. *El lenguaje enmascarado: Un acercamiento a las representaciones gráficas de deidades nahuas*. Mexico City and Warsaw: Instituto de Estudios Ibéricos e Iberoamericanos, Universidad Nacional Autónoma de México; and Sociedad Polaca de Estudios Latinoamericanos, University of Warsaw.
- Mikulska, Katarzyna. 2015. *Tejiendo destinos: Un acercamiento al sistema de comunicación gráfica en los códices adivinatorios*. Zinacantepec: El Colegio Mexiquense and Instituto de Estudios Ibéricos e Iberoamericanos, University of Warsaw.
- Mill, James. 1878 [1829]. *Analysis of the Phenomena of the Human Mind*. London: Longmans.
- Molina, Alonso de. 1966 [1571]. *Vocabulario nahuatl-castellano, castellano-nahuatl*. Mexico City: Ediciones Colofón S.A.
- Montes de Oca Vega, Mercedes. 2004. *La metáfora en Mesoamérica*. Mexico City: Instituto de Investigaciones Filológicas, Universidad Nacional Autónoma de México.
- Montes de Oca Vega, Mercedes. 2013. *Los difrasismos en el náhuatl de los siglos XVI y XVII*. Mexico City: Instituto de Investigaciones Filológicas, Universidad Nacional Autónoma de México.
- Olmos, Andrés de. 1875. *Grammaire de langue nahuatl ou mexicaine, composée en 1547*. Ed. Rémi Siméon. Paris: Imprimerie Nationale.

- Quintilianus, Marcus Fabius. 1974. *Quintilian as Educator: Selections from the Institutio Oratoria of Marcus Fabius Quintilianus*. Trans. Harold E. Butler. New York: Twayne.
- Sahagún, fray Bernardino de. 1950–1982. *Florentine Codex: General History of the Things of New Spain*. 12 vols. Trans. and ed. Arthur J. O. Anderson and Charles E. Dibble. Santa Fe, NM: School of American Research and University of Utah Press.
- Sahagún, fray Bernardino de. 1956. *Historia General de las Cosas de Nueva España*. Mexico City: Ed. Porrúa.
- Sahagún, fray Bernardino de. 1979. *Códice Florentino*, facsimilar ed. 3 vols. Mexico City: Secretaría de Gobernación,
- Seler, Eduard. 1963. *Comentarios al Códice Borgia*. 3 vols. Mexico City: Fondo de Cultura Económica.
- Soustelle, Jacques. 1940. *La pensée cosmologique des anciens Mexicains*. Paris: Herman et Cie Éditions.
- Taube, Karl A. 2000. “The Turquoise Hearth: Fire, Self-Sacrifice, and the Central Mexican Cult of War.” In *Mesoamerica’s Classic Heritage: From Teotihuacan to the Aztecs*, ed. David Carrasco, Lindsay Jones, and Scott Sessions, 269–340. Boulder: University Press of Colorado.
- Tedlock, Barbara. 1982. *Time and the Highland Maya*. Albuquerque: University of New Mexico Press.
- Tedlock, Dennis. 1985. *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. New York: Simon and Schuster.
- Wimmer, Alexis. 2004. *Dictionnaire de la langue nahuatl classique*. <http://sites.estvideo.net/malinal>.