

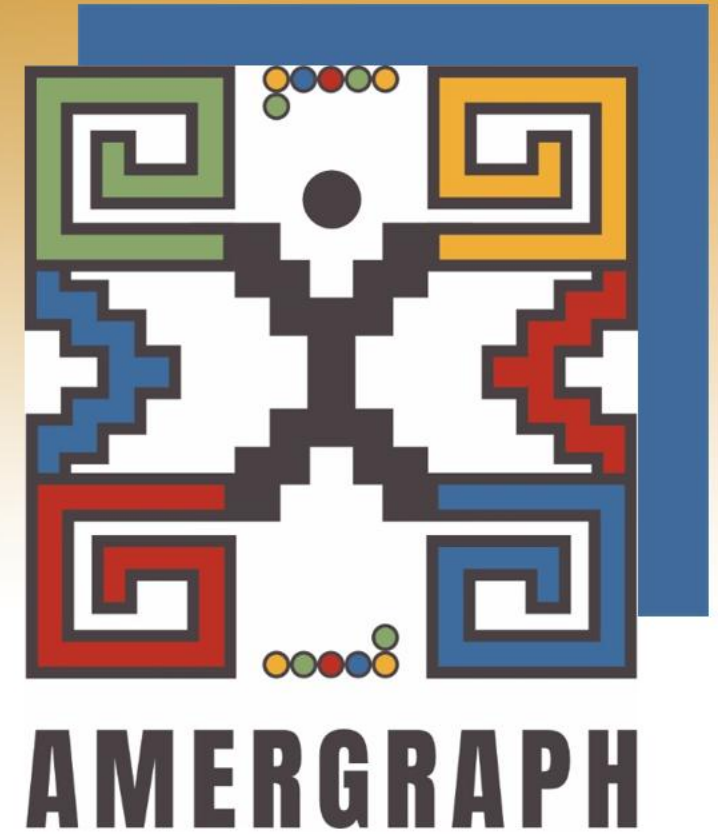
# AMERGRAPH

More than writing: coding & decoding (in) Amerindian graphisms between Mexico and the Andes



# About the project

- A prevalent and predominant approach in the studies on writing systems is that writing is created to reflect spoken language, and therefore the only “true” and “correct” writing system is the alphabet. Nothing could be further from the truth. A deeply rooted approach in the study of writing developed in the so-called Western culture is beginning to be replaced by research on broadly understood graphic communication systems. These systems are not aimed at faithfully codifying speech but rather reflect mental structures and are understandable for the recipient, regardless of the language the person uses
- Due to such an approach to the research on writing, many graphic communication systems, especially those developed outside Europe, were excluded from literacy studies. Thus, the aim of our project is to develop a universal research methodology for Native American writing systems, which will enable a better understanding of the methods of communication and knowledge transfer among American indigenous communities. Therefore, the project aims to answer the question of how graphic communication systems convey meaning in the indigenous cultures of the Americas and how their understanding can contribute to the development of a general theory of writing



# About the project

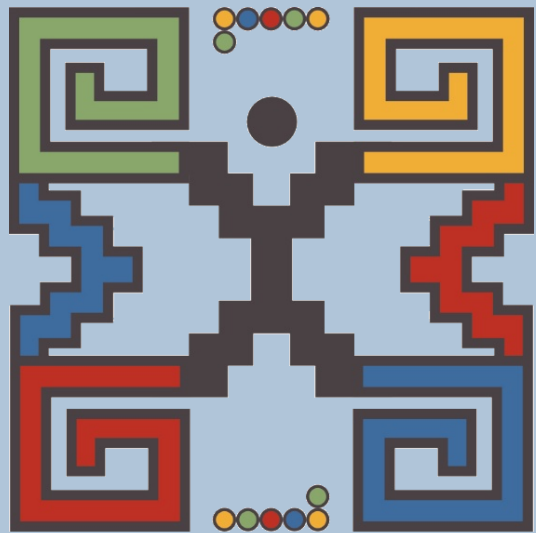
- Several Amerindian graphic systems are to be analyzed on the basis of common methodological principles in five subprojects that will examine respectively: 1) multilayered graphic communication system of the Mixtec and divinatory codices from the Central Mexico, 2) pre-Hispanic graphic system from Tiwanaku and Inca from the Andes, 3) tio-tio writing and graphic communication systems in material culture among the Carib-speaking Yukpa living in the Isthmo-Colombian area, 4) the logic of graphic/visual communication in maize divination system of the Ayöök ethnic group in contemporary Mexico and 5) formal and structural ways of codifying meaning in pre-Hispanic rock art from the northern Venezuela.
- Our project not only brings together researchers from two countries, but also combines specialist knowledge and methods developed for the study of pre-Hispanic and contemporary graphic systems and various cultural regions of America, and consequently also of academic traditions. Thanks to the cooperation of all members of the project, it is possible to constantly exchange ideas, observations and criticism necessary in scientific work thereby guaranteeing a high level of research. This will enable participation in the global discussion on the traditional division of societies into oral and literate, as well as on the general theory of writing.





# SUBPROJECTS





**AMERGRAPH**

# SUBPROJECT 1

Katarzyna Mikulska

Justyna Kowalczyk-Kądziela

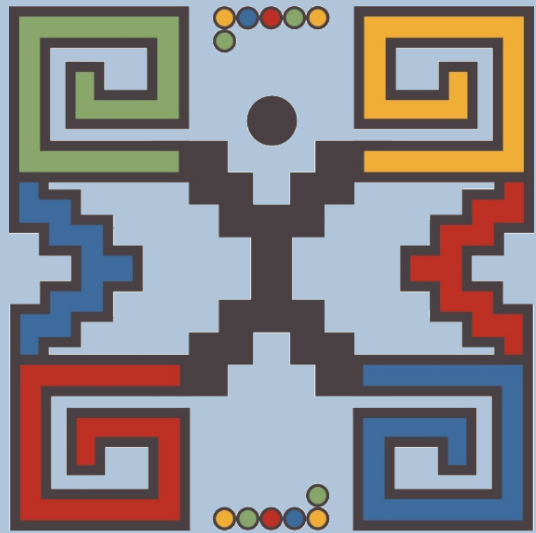
Literacy on the basis of multilayered GCS in Mixtec narratives and Mesoamerican divinatory codices



# SP1

- The subproject focuses on the graphic communication system of the historical and divinatory Mesoamerican manuscripts, also called *codices*. Mixtec pre-Hispanic codices tell the accounts of the local ruling dynasties and are characterized by a narrative construction, manifested mainly in the spatial organization of content. On the other hand, the divinatory codices are documents with complex ritual and religious content, based on the counting of the days, called *tonalpohualli*.
- In our project primarily the recent philological-cognitive method by Mikulska (2008, 2015) and Dehouve (i.e. 2009, 2018) will be applied to the study of these documents with the aim to:
  - investigate how the GCSs applied in Mixtec historical codices create meaning,
  - examine what graphic (notational) strategies are applied at the structural level to create the effect of narration in the Mixtec historical codices and parts of divinatory ones,
  - confront the theories of writing and literacy with central Mesoamerican GCS which do not meet the classic narrow definition of writing but possess a syntax and is capable of codifying narration.
- The graphic discourse of the divinatory—and possibly also the historical— codices share some structural characteristics with the oral discourse (Mikulska 2015; Dehouve 2019), although they are codified in different ways using different media (visual vs. verbal). These solutions encompass a variety of means, such as the graphic display of information and the use of metonymic series (lists of specific characteristics defining the subject through extension (Dehouve 2009, 2019) based on conceptual metaphor (Lakoff & Johnson 1980), also present in the oral discourse and ritual performance). On the sign level, the codification of meaning is made through three components, namely, forms, patterns, and colors, subsequently creating a higher number of possible combinations (Mikulska 2020). Preliminary insight into the Mixtec historical codices allows the assumption that their GCS operates similarly, but this assumption is being verified by working on the codices *Vindobonensis* and *Nuttall*.





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# SUBPROJECT 2

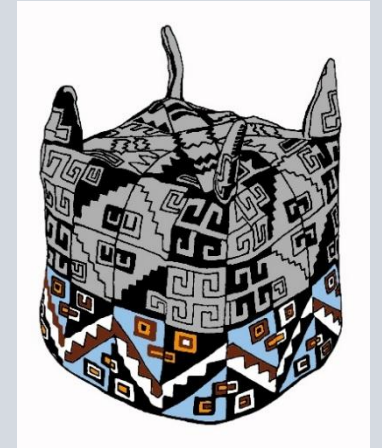
Christiane Clados

Recovering a Graphic Communication System of the  
Prehispanic Central Andean Highlands

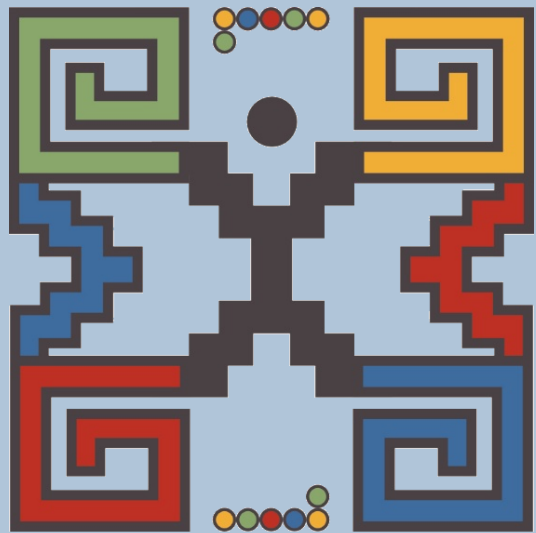


## SP2

- ✓ This subproject focuses on the graphic communication system (GCS) of the Tiwanaku polity (ca. AD 600-1000) as a system that combines elements with very different communicative potential. Since Arthur Posnansky's (1945, 1952) work, researchers have examined theories about writing or iconography with varying degrees of success. It is becoming more and more clear that the Tiwanaku GCS cannot be sufficiently summarized within these traditional modes and that it can be better understood using semasiographic principles (Jackson 2013; Mikulska 2015).
- ✓ The aim of the subproject is to define, at the formal and structural level, which methods of depiction in the Tiwanaku GCS are used to create meaning. Therefore, rather than either addressing it in terms of being either scenic and narrative in character (Viau-Courville 2014: 19) or as conventionalized symmetrical motifs emphasizing various sets of anthropomorphic and ornithomorphic personages which are often at odds with realism (Makowski 2001a, b) the project targets a third possibility, that understands the Tiwanaku GCS as a composite system with incongruent components, which are combined, disassembled and recombined to create nuances of meaning. In the course of this research Tiwanaku GCS is considered as operating with at least two different categories of pictures, i.e. small-scale graphs and scenes. Such areas belong to what scholars of visual culture are regarding as the “domain of images” (Elkins 1999) as, despite their semasiographic nature, the scenes in question are not full pictures and, on the other hand, small-scale graphs are not non-figural signs.
- ✓ As the subproject aims to reveal meanings and to detect the inner logics in the Tiwanaku GCS, it seeks for the identification of the depicted elements and the nature of their structure. A related premise is that scenes and small-scale graphs are comprehensible in themselves. By this, and based on the assumption that the Tiwanaku GCS is not to record speech, the subproject will test existing interpretations of Tiwanaku GCS and contribute to the discussion on what information can be conveyed by images.







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# SUBPROJECT 3

Ernst Halbmayr

Anne Goletz

Exploring Yukpa Graphic Communication systems:  
The role of GCS in tio-tio writing and material culture



## SP3

- ✓ This project aims to inquire for the first time into the multiple and mixed forms of GCSs among the Yukpa. It will document the graphic repertoire of the Yukpa, analyze its internal logics and investigate its relationship to mythical conceptions and ritual political and juridical procedures.
- ✓ This will be done 1) for the mentioned iconography on woven and sewn objects such as bags, baskets, cloths, headbands for carrying baskets, colorful thread applications on arrows, decorations on pipes, face paintings, etc., labeled as tumeno painting or writing in Yukpa and 2) for the hardly known “mnemotechnic writing system” labeled as tio-tio that will be explored and reconstructed in detail. The existence of this “curious” (Cruxent 1956) writing system is described as a method used to remember the content of a message transmitted by a messenger from one settlement to another in a sort of sprechgesang while reading and touching the drawings and in a formal, protocolary presentation during visits in other villages. It is argued that the tio-tio always forms part of a formal transmission of news, orders or petitions between persons of importance.
- ✓ The analysis will be done by formal analytical procedures, fieldwork and resulting emic interpretations of meaning and iconography of material artefacts. These will be interpreted in the regional context of GCS's of related and neighboring indigenous groups.
- ✓ Research hypothesis: Yukpa GCS's rely on different logics and are attached to verbal, rhythmic and mythic codes. They are applied according to different context. Graphic pattern used in weaving may be at the same time iconic and indexical and communicate their meaning not just to other humans but to nonhuman and spiritual beings. GCSs subsumed under the label of tio-tio, in contrast, serve organizational, administrative, juridical and economic purposes.





**AMERGRAPH**

# SUBPROJECT 4

Araceli Rojas

Understanding the Graphic Communication System  
of maize reading



- ✓ This subproject aims at describing and studying the codes which operate on the GCS of maize divination. This is an area closely connected with pre-Hispanic Mesoamerican practices and divinatory codices. This divinatory practice, consisting of throwing maize seeds on top of a table, is said in native accounts to be born together with the calendar. Apparently, the codices themselves were used as boards for casting maize. Therefore, this suggests that both communication systems worked in a multilayered fashion. Unlike codices, and to certain extent the calendar, maize divination still persists among some Indigenous communities, as those described superficially in some ethnographic accounts. The configuration of seeds, depending on the side and direction they fall, form a particular communication system, which lies at the border of the “graphic” and the “visual”, but nonetheless serve for prognostications. Based on this configurations, the diviner and enquirer are able to read symbolisms which aid and give relief in the context of affliction, sickness, bad omens, bad dreams, and bad luck.
- ✓ Previous documentation on the sacred calendar of 260 days used in combination with maize divination among the Ayöök people of Oaxaca offers a good starting point to acquire better understanding of the signs and meanings of this divinatory technique. New empirical data, documented in close connection with its social and religious context, is needed in order to investigate which are, and possibly were in the past, the operational codes that make possible the transmission of knowledge through particular notation and the creation of narratives, in a similar way as codices do. To achieve this, fieldwork will be conducted among the Ayöök (Mixe) of Oaxaca, Mexico, who employ this divinatory technique along with the predictions and prescriptions of the 260-day calendar. By collecting empirical data, the aim will be 1) to provide a repertoire of possible maize configurations and meanings, and 2) analyze the operating codes of this GCS using emic notions for reading occult messages and complementing with cognitive semantics and possibly other semiotic and psychological resources.





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# SUBPROJECT 5

Karolina Juszczyk

Graphic Communication System of the Carabobo rock art



- ✓ The main goal of this subproject is to investigate the Venezuelan rock art GCS from the perspectives of archaeology, ethnology, history, and cognitive linguistics, with the methodologies used by other subprojects of this joined enterprise, in order to look for the meaning of the signs and their internal syntax. Other particular aims are 1) creation of classification of rock art signs from the emic perspective, 2) determination of particular signs and/or syntaxes as the concept vehicles, and 3) determining if the notation principle plays a role in the process of (de)coding the signs' meaning.
- ✓ The main hypothesis is that rock art constitutes a visual code of meaning, so it can be treated as a GCS, with its repertoire of signs and syntax or inner logic. Nevertheless, instead of superimposing Western categories in order to classify the signs and look for their meaning in this way, the main assumption is that the native categories must be taken into account. The second working hypothesis is that the geographical distribution of the signs “on the ground” is at the same time made according to the notational principle, that is to say, part of the meaning is codified through the spatial reference between the signs.
- ✓ The arrangement of particular signs plays a significant role in the process of reading this kind of information. Moreover, the spatial references among the rock art signs is compared with their geographical distribution in the studied region. Subsequently, all the results of previous analyzes are compared to define the exact groups of signs that will be considered in further semantic analysis in terms of building communication models. This study is led from the emic perspective based on the interpretative approach, the cultural context of the discussed area, which is the base of all anthropological and cognitive linguistics.





# PROJECT MEMBERS



# Katarzyna Mikulska, PI

- Associate professor at the University of Warsaw, Faculty of Modern Languages, Institute for Iberian and Iberoamerican Studies.
- Her research interests are: theory of writing, native American and non-European scripts, pre-Hispanic Mesoamerican divinatory codices, pre-Hispanic religion of Central Mexico, divinatory systems and practices
- She has extensively worked on deciphering the pre-Hispanic divinatory codices from ancient Mexico, mainly Codex Borgia and Codex Vaticanus B. She has given full courses on divinatory codices in different institutions in Poland, Mexico and Germany, as well as speeches and seminars in Mexico, Spain, France, United States, Great Britain, and the Netherlands (Leiden University). She has with original pre-Hispanic codices in the Vatican Library, National Library of France and Bodleian Library.
- She is the author of two monographic books (one of them nominated in 2016 to the Kotarbiński Prize as the most outstanding book in the field of humanities in Poland) and of ca. 40 articles and book chapters. She has also edited four volumes in international cooperation, two of them being the results of her last projects: one on the Graphic Communication System of pre-Hispanic central Mexico (2019) and the other on the Codex Vaticanus B (Vat. Lat. 3773).



**SP1**

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# Ernst Halbmayer, PI

- Professor of Social and Cultural Anthropology at the Institute for Social Anthropology and the Study of Religions, University of Marburg. He received his PhD (1997) and his Habilitation (2008) from the University of Vienna and was an associate researcher at the Laboratoire d'Anthropologie Sociale, Paris, honorary fellow at the University of Wisconsin, Madison and visiting Professor at the Universidad de los Andes, Bogotá.
- He works on the Isthmo-Colombian area and Carib-speaking groups and has conducted field research among Carib- and Chibcha speaking groups, especially the Yukpa since the early 1990s. The main topics of his research are Indigenous modernities, cosmology and sociality, the anthropology of nature and the anthropology of conflict and violence.
- Among his publications are 2018: *Indigenous Modernities in South America*, (ed.) Sean Kingston Publishing; 2020: *Amerindian Socio-Cosmologies between the Andes, Amazonia and Mesoamerica. Toward an Anthropological Understanding of the Isthmo-Colombian Area*. (ed.) Routledge, 2020: *Ofrendas, intercambios y otros modos de relación en las socio-cosmologías indígenas contemporáneas del área istmo-colombiana*. Special Issue ed. by Mònica Martínez Mauri & Ernst Halbmayer *Tabula Rasa* 36: 19-320 <https://www.revistatabularasa.org/numero36/> 2023: *Creation and Creativity in Indigenous Lowland South America* (eds. Ernst Halbmayer & Anne Goletz). Berghahn Books, New York and Oxford.



**SP3**

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# Christiane Clados, CI

- Research Associate at the Department of Social and Cultural Anthropology at Philipps University Marburg where she has been teaching since 2012. She completed her Habilitation at Philipps University and her doctorate at Free University Berlin.
- Her research interests lie in the areas of visual studies, ranging from theory to methods of analysis. Her work focuses specifically on graphic pluralism of the Americas, with particular emphasis on visual anthropology, art history and graphic communication systems of the Central Andes and Isthmo-Colombian Area. She has collaborated actively with researchers in specific disciplines of archaeology, museology and digital heritage.



**SP2**

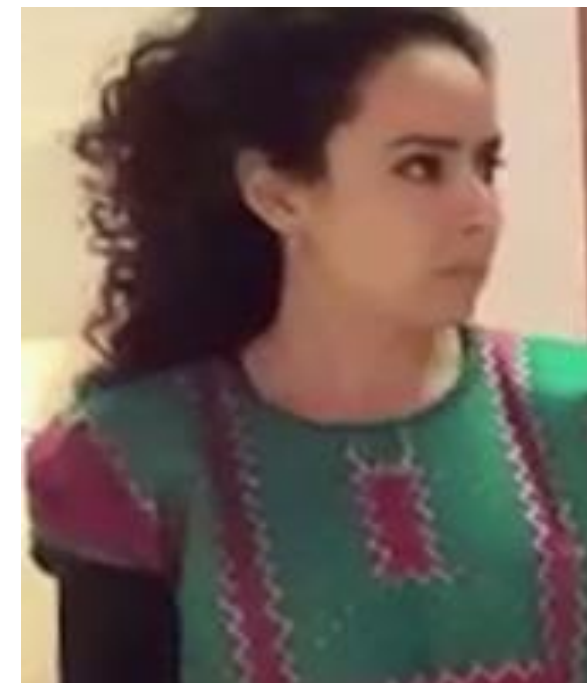
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- Additional information:

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# Araceli Rojas, CI

- Research Associate at the at the University of Warsaw, Faculty of Modern Languages.
- She studied Anthropology and Archaeology in Mexico. In 2007, she won a position to conduct a PhD research hosted by the University of Leiden, the Netherlands. For that project, she documented the social context and uses, rituals and worldview symbolisms associated with a 260 day-calendar handled by the Mixe people of Oaxaca. This work is one of the very few existing ethnographies which pursued integration with the local community and learning of the indigenous language. Her PhD thesis was awarded first prize in a national competition and was published in 2014. From 2011 to 2013 she performed as Lecturer in the faculty of Archaeology, at Leiden University, and from 2013 onwards as Assistant Professor. In 2017, she was a Visiting Fellow at the International Research Consortium “Fate, Freedom and Prognostication. Strategies for Coping with the Future in East Asia and Europe” at the Friedrich-Alexander University in Erlangen, Germany. In this same year, she won a Marie Skłodowska-Curie Grant (IF), Horizon 2020, for her project "Oracles of the Other World: Using Ethnography to Study Depictions of Human Remains in Mexican Precolonial Codices". This project was carried out at the University of Warsaw, Faculty of Modern Languages.



**SP4**

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# Anne Goletz

- She started the project as PhD candidate, and she received her PhD on *Creating Common Ground with Animals, the Dead and the Deified Maize Bringer - Transspecific Communication in Sokorhpa, a Yukpa Territory in Northwestern Colombia* at the Department of Cultural and Social Anthropology at the Philipps-Universität Marburg in 2024.
- In her doctoral project, she studies the ways how people in Sokorpa, a Yukpa territory in the Serranía de Perijá in Northern Colombia, communicate (or avoid communicating) with their other-than-human surroundings. Her research was supported by a research grant from the German Academic Exchange Service (Deutscher Akademischer Austauschdienst) and a PhD grant from the Evangelisches Studienwerk Villigst. She has done 24 months fieldwork in the Serranía de Perijá between 2014 and 2023.
- Since 2013 she has been a staff member of the Department for Cultural and Social Anthropology at Philipps-Universität Marburg. She formed part of the research project “Contextualizing Yukpa language and myths. The linguistic and ethnological position of an outsider in the Cariban language family and the northern Andean lowlands,” financed by the German Research Foundation (DFG) from 2017 until 2020. In the “More than writing” project she examines graphic signs present in Yukpa material culture.



**SP3**

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# Karolina Juszczak, PhD cand.

- PhD candidate at the Faculty of Modern Languages at the University of Warsaw. Graduated Archaeology at the University of Warsaw.
- Graduated in Archaeology at the University of Warsaw. She gained experience in archaeological fieldwork in Poland, Italy, Georgia, Lebanon, Bulgaria, Herzegovina, Peru, and Mexico.
- In her archaeological work, she uses Geographical Information Systems. In her doctoral project, she combines archaeology with philological and cognitive studies. For a few years, she has been working on rock art from the Andean region, where she was running the project at Toro Muerto archaeological site (southern Peru) under the “Diamentowy Grant” financed by Polish Ministry of Science and High Education.
- In the current project, she analyzes the northern Venezuelan petroglyphs using the methodology that is used for graphic communication system research. From 2018 she performed as Lecturer in the Institute of Iberian and Ibero-American Studies at the University of Warsaw.



**SP5**

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# Justyna Kowalczyk-Kądziela, PhD cand.

- PhD candidate at the Faculty of Modern Languages, University of Warsaw. Graduate of the Institute of Iberian and Ibero-American Studies where she obtained a master's degree with a dissertation on the symbolism and usage of the plant *malinalli* in pre-Hispanic Central Mexico. She also studied History and Anthropology of America at the Complutense University of Madrid. She presented the results of her investigation at several international conferences as well as by giving a lecture at the Ecole Pratique des Hautes Etudes, Paris.
- Her research interests include mainly the pre-Hispanic Mesoamerican graphic communication systems, the pre-Hispanic religion of Mexico, and semiotics



**SP1**

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# PROJECT RESULTS



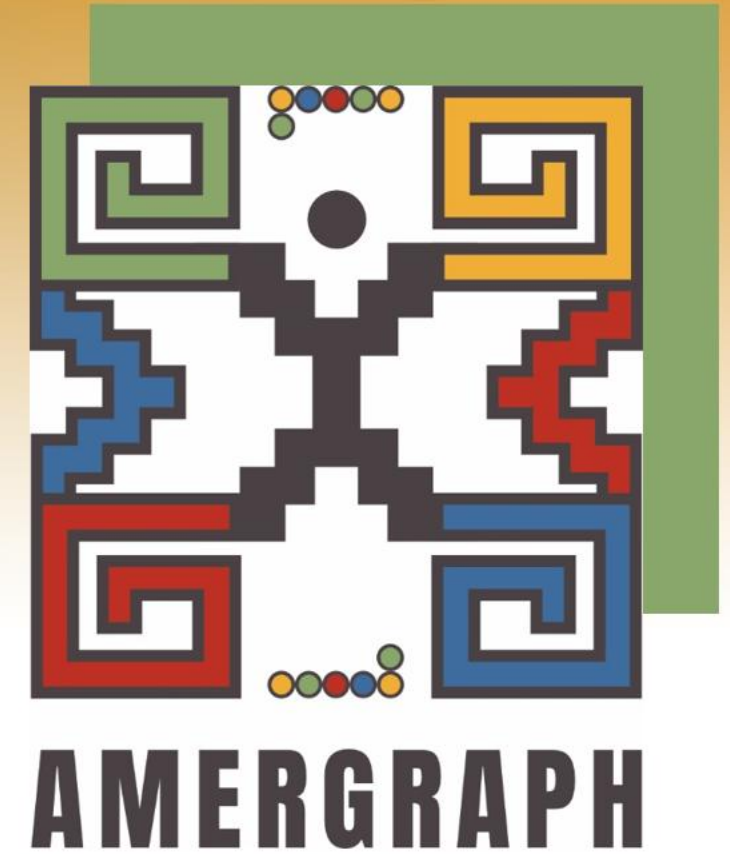
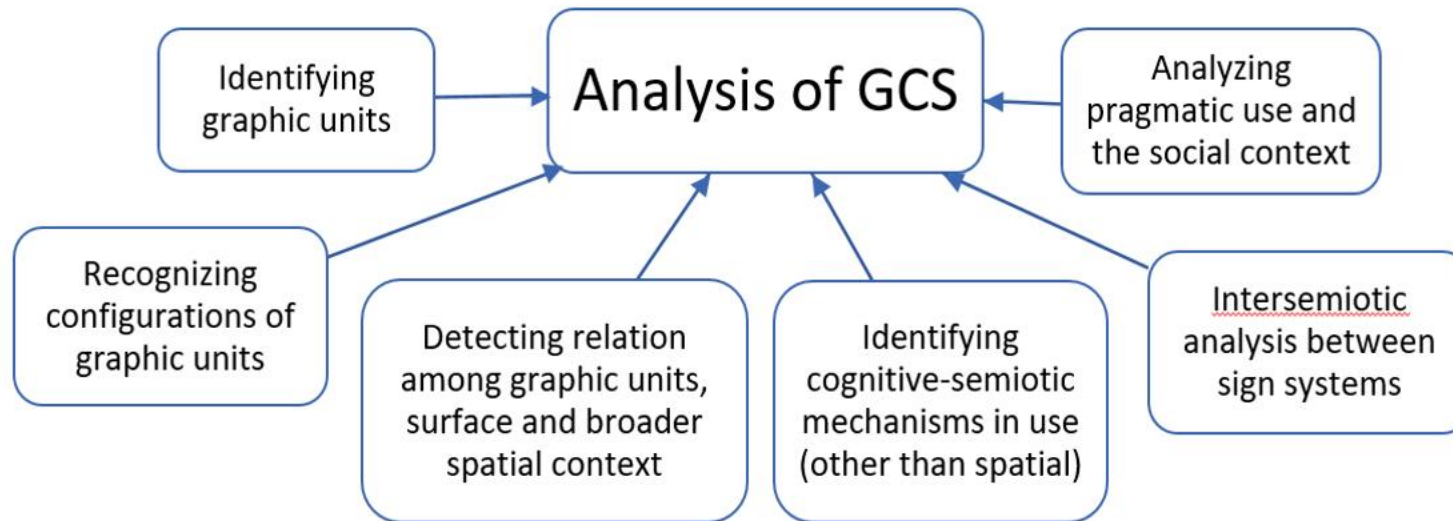
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- ❖ Given the diversity of Indigenous GCS and gaps in knowledge, no single methodology can be universally applied. Instead, depending on the GCS, the available data, and the state of knowledge, the analysis should look for functional principles, that is, in what ways the meaning is created and transmitted. This can be reached by using the following analytical and not hierarchical dimensions:



- ❖ The ultimate goal of the project was directly aimed at contributing to the development of the field of study (discipline), taking into account existing and newly elaborated knowledge about how particular Indigenous GCSs work. Our main contribution is that the field of study currently covered by linguistics and the theory of writing (or grammatology) should evolve into a theory of graphic communication systems.
- ❖ Finally, this project serves as a first step towards the development of a flexible and universal approach to the analysis of Indigenous GCSs that will allow us not only to understand how they work and what meanings they encode, but also to expand our knowledge on Indigenous world and the ingenuity of human mind.

