PUCRS

FACULDADE DE HISTÓRIA
PROGRAMA DE PÓS-GRADUAÇÃO EM HISTÓRIA
MESTRADO EM HISTÓRIA

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THEORY AND PRACTICE IN *BASIN ARCHAEOLOGY*: UNDERSTANDING ARCHAEOLOGICAL EPISTEMOLOGIES THROUGHOUT THE RIO DE LA PLATA BASIN

Porto Alegre
2021

PÓS-GRADUAÇÃO - *STRICTO SENSU*

Pontifícia Universidade Católica
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THEORY AND PRACTICE IN *BASIN ARCHAEOLOGY*:
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Trabalho de John Gabriel O’Donnell apresentado ao Programa de Pós-Graduação em História da Pontifícia Universidade Católica do Rio Grande do Sul - PUCRS, como requisito parcial para a obtenção do título de Mestrado em História

Orientador: Prof. Dr. Klaus Peter Kristian Hilbert

Porto Alegre

2021

Ficha Catalográfica

O99t O'Donnell, John Gabriel

Theory and practice in basin archaeology : understanding archaeological epistemologies throughout the rio de la plata basin / John Gabriel O'Donnell. – 2021.
155.
Dissertação (Mestrado) – Programa de Pós-Graduação em História, PUCRS.

Orientador: Prof. Dr. Klaus Kristian Hilbert.

1. south american archaeology. 2. epistemology. 3. praxis. 4. rio de la plata basin. 5. methodology. I. Hilbert, Klaus Kristian. II. Título.

Elaborada pelo Sistema de Geração Automática de Ficha Catalográfica da PUCRS
com os dados fornecidos pelo(a) autor(a).
Bibliotecária responsável: Clarissa Jesinska Selbach CRB-10/2051

This work is dedicated to my wife Júlia

ACKNOWLEDGMENTS

I would like to thank my intellectual mentor Dr. Klaus Hilbert for being a friend, a teacher, a fellow *bon vivant*, and supporting me on this fascinating journey.

I would like to thank my brother William J. O'Donnell for his incalculable assistance and helping me to be a better writer. He is also a *bon vivant* by the way.

Finally, and not leastly, I thank the archaeologists, my heroes, who have supported my study and let me investigate them and their work. Their unlimited kindness, generosity of time, intellectual enthusiasm and joy in discovery will not be forgotten. This hearty thanks goes to Dr. Rafael Milheira at the University of Pelotas, Dr. Gustavo Politis and Dr. Mariano Bonomo at the Museum de la Plata, Dr. Jairo Rogge and Father Schmitz at UNISINOS, Dr. René Vellanoweth at Cal State L.A., and Dr. Julie Hoggarth at Baylor University.

ABSTRACT

The interplay and discussions between theory and method in archaeology have developed an on-going and incessantly dynamic relationship throughout the discipline's short history. At the core of the debate are concerns about what kinds of knowledge can be reliably obtained from the material record of the past(s). This prodding into the limits and possibilities of archaeologically-derived epistemology are explored in this project at a regional scale. This paper attempts to reveal the dynamics between the historical and political precedents of a region's research history and how the specifics of the area's archaeological record combine to manifest unique combinations of method and theory (praxis) that sculpt research priorities. It uses a selection of contemporary case studies from throughout the Rio de la Plata Basin in order to illustrate the wide variety of methodological approaches. It is meant as both a wide-ranging survey sample of the theory and method at play in current research in the area, but also an introduction to the perennial archaeological topics of interest unique to the *basin* region. By taking a regional approach to the theoretical questions about the variety of epistemic goals of archaeology, it is hoped the paper can offer concrete examples, in a verifiable historico-regional context, of how both ontologically *objective* (measurable) and ontologically *subjective* (human internal) realities of the past are both being approached simultaneously in contemporary archaeology.

Keywords*:* South American archaeology, methodology, epistemology, praxis, Río de la Plata basin

RESUMO

A interação e as discussões entre teoria e método na arqueologia desenvolveram uma relação contínua e incessantemente dinâmica ao longo da curta história da disciplina. No centro do debate estão as preocupações sobre quais conjuntos de conhecimentos podem ser obtidos com segurança a partir do registro material do (s) passado (s). Esse estímulo aos limites e possibilidades da epistemologia derivada da arqueologia é explorado nesta dissertação em uma escala regional.

Essa dissertação procura revelar a dinâmica entre os precedentes históricos e políticos da história de pesquisa de uma região e como as especificidades do registro arqueológico da área se relacionam para formar combinações únicas de método e teoria (práxis) que determinam as prioridades de pesquisa. A dissertação apresenta uma seleção de estudos de caso contemporâneos de toda a Bacia do Rio de la Plata com a finalidade de ilustrar a ampla variedade de abordagens metodológicas colocadas em prática nesta região. O trabalho representa uma amostra abrangente a respeito das teorias e dos métodos usados na atual na área de pesquisa, mas também uma introdução aos tópicos arqueológicos de interesse exclusivo para a região da bacia. Ao fazer uma abordagem regional das questões teóricas sobre a variedade de objetivos epistêmicos da arqueologia, espera-se que esse trabalho possa oferecer exemplos concretos, em um contexto histórico-regional verificável, de como tanto ontologicamente objetivo (mensurável) quanto ontologicamente subjetivo (humano interno) realidades do passado estão sendo abordadas simultaneamente na arqueologia contemporânea.

Palavras-chave: arqueologia sul-americana, metodologia, epistemologia, prática, Bacia do Rio de la Plata

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INTRODUCTION TO THE *BASIN* AND ITS DIMENSIONS

1.1 *BASIN* ARCHAEOLOGY: GENERAL CONSIDERATIONS

The Río de la Plata (river of silver) *basin* in South America comprises more than 38,800 km2 of land and is the drainage basin of approximately 3,170,00 km2 of adjacent areas, making it the second largest drainage system on the South American continent. (WELLS; DABORN, 1997). It includes significant portions of Brazil, Argentina, Uruguay, Paraguay and Bolivia, and also the entirety of the Uruguay, Paraná and Paraguay rivers. Archaeologically it exhibits a well-established archaeological record of human occupation going back to at least to the Upper Paleolithic - Holocene transition. (SUÁREZ, 2015). It has been inhabited by a wide range of societies and cultural groups throughout this time who have sustained their livelihoods through a similarly diversified set of practices including hunting large game, fishing and boating, organized horticultural practices and accompanying religious, artistic, political, and economic systems. The additional archaeological record of colonial settlements and cities since the arrival of Europeans, and imported african slaves, including religious and military centers used throughout the process of colonization, have been studied as historical archaeology.

From the standpoint of a theory of archaeology survey (which this project attempts) the area offers a unique case study for a few important reasons:

The large size of the basin allows for ample comparison between both research subjects being addressed, regional trends and methodological variety but without getting derailed by the near impossibility of surveying, for example, the entire continent (for an excellent example of a continent-wide archaeological overview see Politis and Alberti's 'Archaeology in Latin America', published in 2000). As the content of this text demonstrates the archaeological research subjects throughout the *basin* including research aimed at the very ancient past (for example - the peopling of the Americas and the first signs of tool making and art in the area) to the more recent (the complex cultural families of indigenous peoples who inhabited and continue to inhabit the area) to the "historical" (post-Contact archaeology) and right up to the present (incorporating all of these focuses with contemporary concerns and social development). Because there is no single running narrative or widely-accepted belief regarding a 'high-point' of

cultural development in the area, it allows a better chance to offer equal attention to each aspect of the research being undertaken.

The *basin* is also unique in light of its relatively minimal international exposure compared to other areas of the continent. Theordoro Sampaio (1995 apud HILBERT, 2001) and others have pointed out that the absence of large, stone-based, pyramidal structures in the archaeology record automatically diminishes the value of the archaeology being performed in the region in the eyes of the local public, the international community, and the government institutions that often control the purse strings and other resources needed to undertake the research. In Peru, Mexico, and elsewhere the blunt appeal and intrigue of massive, monumental ancient architectural works often seals the deal regarding the public's appetite to appreciate and support the archaeologists.

Likewise, the emphasis in South American archaeology on research pertaining to the Amazon River basin and its past, often leaves the southern cone in the intellectual shadows. The gravitas that the Amazonian region holds in the global public imagination as a mysterious land full of both of a final ecological promise, pharmacological miracles, indigenous knowledge and the jaw-dropping scale of its size and beauty have drawn attention, quite validated, to itself. However, as Cristiana Barreto points out:

> The limited knowledge of Brazilian archaeology confirms the North American misperception that equates Brazil's vast territory with the Amazon basin, and its archaeology with the study of past populations in tropical forests. On the contrary, the Amazon basin corresponds to only one-third of the country and is not all covered with tropical forest. Furthermore, most archaeological research done by Brazilians is outside Amazonia, mainly because it remains the country's least developed region. (BARRETO, 1998, p. 574).

From an archaeological and anthropological perspective, the on-going discussions regarding a continental 'Mother Culture', the clear indications of Amazonic influence in the Andean and *basin* civilizations, and even the possible connections to Mesoamerica and beyond, have firmly

place the Amazon region and its surrounding areas at the heart of a dynamic archaeological discussion that shows no indication of slowing up.

Because the Río de la Plata does not contain the elaborate stone cities of the Andes or the universal appeal of the Amazon, it risks being overlooked outside of its regional participants when South American archaeology is brought up in international forums. This unbalanced view of the archaeological record offers a fantastic opportunity to bring forth a sample of the on-going research being done in this massive and varied area and hopefully offer some assistance in offering an introductory sampling of *basin archaeology* to outside readers. In the same way that a field archaeologist might begin a large scale site analysis with a series of sample 'test pits' in order to assess the variety of the site's offerings; this paper 'samples' archeological works with a similar methodology. Previous compendium works such as *Arqueología de Las Tierras Bajas* (BOKSAR; COIROLO, 2000), organized by the Education and Cultural Ministry of Uruguay, have offered excellent horizontally arranged analyses of the topics of archaeology in the *basin region*, with an excellent synopsis of its main research findings. There are also some nationally-oriented histories *of* archaeology that have been developed for the primary countries in question. However the purpose of this project is to examine the ways in which diverse archaeological methods are applied in individual cases to answer research questions born out of identifiable theoretical traditions. Therefore, the case studies described here are not meant to be representative of the whole of *basin archaeology* or even of the most well-known or well-publicized individual research projects (though in many cases they are). Just like the test pits dug at an excavation site might be intuitively chosen to capture the variety of possible points of further investigation, the case studies organized and explored here were also selected for their variety of technique and the specificity of each approach. References to developments in method and theory at a macro-level will be mentioned from time to time, but the hope is that these larger questions will also be anchored to reality via the regional case studies under discussion.

When considering the body of archaeological research literature that pertains to and is produced within a specific geographic area —- in this case the RÍo de la Plata Basin —- there are many factors that must be considered when attempting to understand or recognize conceptual tendencies, choices in methodology or unique approaches within the body of published material.

These contributing factors are complex and often subtle in their influences, especially when generalizing for a large area, but an acknowledgement of their presence and consideration of their potential impact on the research practices is essential.

The most obvious restraint on 'kinds' of archaeology being done in any given area is the archaeological record itself. While never fully exhausted and always leaving open the possibility that new finds can throw surprising monkey wrenches in the cogworks of a well-oiled and well-established set of 'regional focuses' pertaining to the archaeological record, it nonetheless is clear that approaches in methodology especially, will be greatly influenced by the kinds of 'finds' that evident in the record. Marine archaeology (archaeology of subaquatic finds) will certainly employ a different array of best practices than rock art archaeology (petroglyphs and pictographs). This does not speak to the challenge and complexity in 'determining' or 'defining' sites, which is a whole other filter to be discussed later. (For example: A pictograph on a beach cliff face may be at the same 'site' as the 17th century sunken ship being excavated and in this situation decisions will need to be made about how to define and analysis the relationship between the two components, if there is one, but the methodology in approaching the rock art and the sunken ship will be rigorously different and the analytic approaches to deciphering the finds equally so).

Now when we allow archaeology its widest possible analytical net as a discipline and open up all material evidence of humanity's past as its purview, there is certainly no end to what could be 'excavated' and analyzed to deepen our understanding of human history and behavior via material culture. It certainly need not confine itself to *very old things* or the ancient, the pre-colombian past (in American archaeology), or, when considering the widely held understanding of *historical archaeology*, i.e. colonial architecture (or anything that doesn't quite look like our modern world). To explain archaeology's strong tendency towards the distant, rather than recent, past is not difficult. Generally speaking, for many of the past societies and their cultural manifestations, the material record may be a large part or all that is left of what is available in terms of studying their society. While certainly ethnoarchaeology has made great headway into supporting archaeological finds with contemporary parallel comparisons of the

groups under examination, there are still the vicissitudes of time and space that can make the links less robust than a full explanation of all aspects of distant beliefs and behaviors.

More updated material culture studies have championed and developed the idea that archaeological thinking should be more commonly applied to contemporary subjects (studying *recent* history through material evidence), but the general thinking is that other data, including written records (considered simply *history*), provide the lion's share of relevant information. This is debatable and the conversation between archaeology and material culture in general will continue to be an interesting one as it unfolds.

Setting aside for now the question of why archaeology does not generally concern itself with more recent historical periods, we can recognize that the Río de la Plata region is certainly no exception to the rule. A large majority of the published literature generally falls under two very generalized categories: either, a) Archaeology of indigenous societies (pre-colombian) or b) Historical archaeology (essentially colonial and contact period studies). The former, pertaining to indigenous populations and their history, makes by far the majority of the research done and when compared to the duration of the corresponding periods of time, this emphasis on pre-historical topics is completely justifiable.

The dramatic disruption and oftentimes total destruction of the existing social groups brought on by the arrival of european settlers was both rapid and deliberate. Though many of these communities continue to live on and manifest their individually unique worldviews and lifestyles in a newly situated diaspora, the large scale of the forced migrations away from their previously settled areas meant that often the material record left behind was the most accessible evidence of the details of the violently disrupted social order. On top of that, there is a record of at the lowest estimates, more than 10,000 years of dynamic human habitation and social and cultural developments in the area that for the most part cannot be analyzed or seriously understood in any better way than the archaeological evidence.

As mentioned earlier, much of the attention the general public pays to the archaeological record, is quite unsurprisingly, to the most evidently and immediately impressive material finds. Monumental architecture specifically has long been publicly associated with the public's perception of the purpose and practice of archaeology, i.e. to preserve and explain the large,

visually inspiring construction projects of the past. The curiosity and fascination surrounding ancient interred humans and their accompanying elaborate burial goods, likewise offer immediately visually and thematically stimulating content to the public imagination, and the reasons why these reactions occur are self-evident. However the entire archaeological record does not correspond to the rare instances of monumental stone construction projects throughout history — the Río de la Plata *basin* is certainly a case in point. More than a thousand centuries of human occupation will indeed leave many vestiges behind, but the question of what form that evidence will take depends largely on the lifestyles and practices of the people under study. The nature and durability of the material employed in native technologies, the post-depositional dynamics of weather, water and soil, subsequent disturbance or re-use of remains by antecedent area occupants, and current accessibility to the record will all plan major roles in the 'kinds' of archaeological sites that one associates with a region.

It must be emphasized that human beings have managed to fill the environmental niches of nearly every inhabitable part of the global, so when considering the question of what regions offer up archaeology, the answer is quite clear — everywhere. It then becomes a matter of site detection and selection, since an entirely thorough investigation of a given area's archaeological past is logistically and epistemologically untenable. Once enough archaeological investigations have been undertaken and compared, generally over a multi-generational period of time, to represent both the variety and shared characteristics regarding an area's material cultural offerings, it can become reasonable to offer some generalizations regarding the region's archaeological record.

In this sense we can reliably expect that some of what defines the manifestations of *basin archaeology* (its methods, theories and interpretations) are the factors that have influenced the available archaeological remains. Some of the generalizing factors here include the entire area's hydrological nature. Being a basin, by its very nature the area is inundated with water and considering the amount of time under question (thousands of years) the hydrodynamics of this network have naturally undergone many dramatic changes that have had major impacts on the archaeological remains. Moisture itself is unfavorable to material preservation, causing intensified deterioration of artifacts, and in the cases of larger occupation sites, changing water

levels, intermittent variations in riverine flows, flooding and the changing nature of the coastline, can cause once occupied centers and entire swathes of land underwater or secondary sediments. While underwater archaeological recovery is a growing and robust field of practice, it is not always practical due to the high demand on logistical, expertise and financial costs. Especially areas, such as the extensive lagoon and swamp-like ecosystems of the Río de la Plata, much of the area is simply out of the practical reach of extensive archaeological survey.

The other major factors defining the archaeological record of a region, namely the lifestyles and survival practices of the peoples leaving behind the evidence are also prescient in the makeup of *basin archaeology*. One of the main discussions and themes running throughout research in the area is the extent to which past societies in the area were permanent versus nomadically disposed in their settlement practices. Perhaps the debate continues simply due to a large variability in this regard when it comes to the many different groups (over a very large time period) under investigation. However, something that can't be denied is that large architectural structures were abundant (see the shellmounds, earthen mounds and pit constructions described below), but the materials with which they were constructed (earth, shells, wood, ceramics) present enormous challenges in reconstructing their final form and intended use. The structural remains are such that it takes a certain basic level of archaeological expertise to recognize them, let alone explain their probable uses. Due to the subtlety of their extant profile in the current environment, some impressive and inventive methods have been developed and employed to predict and confirm the locations of these occupied areas (see CRUZ, et al. described below).

The possibility that some cultural groups generally did not utilize large-scale permanent settlements — again, an issue under continuing discussion — there is the added challenge of locating and making sense of the archaeological evidence of living practices based on highly mobile societies which utilized both overland and aquatic thoroughfares. The GIS-based modeling of researchers such as Rafael Milheira (and others) is one forward-thinking approach to offer 'most likely' models based on previous finds, but also heavily incorporating geomorphic, 'line of sight' and hydrographic prediction models. (see discussion of Milheira's 'Water, Movement and Landscape Ordering below).

Due to the large scale disruption and/or total destruction of native societies wrought by the Europeans, other non-archaeological sources have become key factors in attempts to reconstruct pre-colombian social and cultural realities. Ethnoarchaeology and chronicle historical studies are both invaluable in this regard, but equally imbued with their methodological biases and challenges. Many of the early european exploration/exploitation parties that entered the area often employed a team of artists, illustrators, diarists and sometimes scientists to record the details of the local flora, fauna, geography, and most importantly to our subject, the local populations. (MAZZ, 2005). Without a doubt this material could be considered reliably misinterpretive, imbued with racial, cultural and ontological biases at best, and totally inaccurate at its worst. However, there is no denying the fact that even considering the obvious one-sided nature of such 'descriptions' of the cultural and social outlook upon the arrival of the european invaders, once the distorted contextual lens of the chronicles are taken into consideration, they can still contribute significantly to a deeper knowledge of likely aspects of human life in the area prior to full blown colonization and widespread devastation. This is especially pertinent when the information culled from the chronicles aligns evidentially with the archaeological finds.

Another important factor to include when comparing regional archaeological practices is to acknowledge forthrightly that archaeology is a resource intensive discipline. The possible frequency and scope of excavations depends on the depth of financial coffers. Excavation teams need to be sheltered and fed; tools and equipment, ever more expensive and technologically-driven, need to be procured and used by qualified technicians; items and artifacts need to be processed, transported safely and stored for perpetuity in environmentally secure spaces; and finally academic leaders and understudies need to be paid to analysis, synthesis and theorize about the salvaged material. This requires a massive financial commitment and an initial perceived investment by the institutions or individuals footing the bill.

Needless to say the disparity in resources allocated to archaeological research when comparing different regions and countries around the globe is a wide one. Typically, where more money is invested in archaeology (the reasons may vary), more archaeology is performed, preserved and disseminated, and therefore the subject is more likely to enter into an intellectual and cultural dialog with the local public and the interest elicits more investment. It is a cyclical

and symbiotic affair. Where resources are scarce or non-existent, the research suffers, the findings are diminished in scale and the discipline is threatened with an evaporated public interest.

In countries with consistently unstable and at times desperate economic situations like Brazil, Argentina and Paraguay resources towards archaeology, anthropology and the humanities and research in general have been unstable at the best of times and totally lacking in others. The rising tide of culture resource management (or heritage) archaeology, contracted by private development firms, has become the primary source of income for most archaeologists practicing in the region. Needless to say, the aims of this kind of salvage archaeology, required by the federal state, are quite different in their execution, focus and resulting finds than archaeology driven by academic inquiry or with the public interest in mind. (FUNARI; ROBRAHN-GONZÁLEZ, 2008). Though this struggle in allocating funds and manpower in limited archaeology projects between private and academic aims is certainly felt worldwide, it is especially exacerbated in countries with struggling economic realities, where often the private sector archaeology is the only viable means of surviving as an archaeologist.

There is also a further-complicating interplay between the methodological tools demanded by the character of the archaeological record of a region and the costs of their procurement and implementation. By way of example, large scale use of lidar imaging, 3D modeling using satellites and obtaining significant carbon sampling results for dating purposes are all incredibly costly procedures that have become essential parts of the toolkits of modern archaeologists. These techniques are especially pertinent when attempting analyzes of questions regarding site location, migration models and settlement patterns over massive areas of land — exactly the kind of archaeological questions that are so often the focus of *basin archaeology.*

1.2 HISTORICAL AND POLITICAL CONTEXTS

Aside from the very practical restrictions on research due to a dearth of funding, there are additional institutional pressures and demands that can heavily influence the profile of regional archaeological practices. Ever-shifting expectations and restrictions (both formal and informal) from academic, governmental and widespread cultural institutions (the media for example), are

always present when research questions are formulated and executed. The government bodies in charge of legally defining and managing culture resources and public heritage (archaeological remains apply) such as IPHAN and CNPq (regulatory and resource bodies from Brazil), CONICET (Argentina), and the Ministry of Education and Culture (Uruguay) are by their very nature political organizations. Changes in federal administrations, forms of governments, high-level management and funding cuts can all have major impacts on the tone, focus and degree to which research is incentivised or directed to follow.

Archaeology, in general, is particularly prone to interest and unsolicited influence from political actors. Because it claims are widely seen as being analogous to the facts of a 'hard science', its expertise and findings can provide powerful evidential ammunition to support claims about historical, nationalistic, ethnic or racial realities that are promoted by those seeking to justify or debunk historical claims. (KOHL; FAWCETT, 1995). In Latin America generally, this tendency of governments to steer the ship of archaeological investigations has certainly ebbed and flowed over the decades, as ideas regarding national identities and what aspects to highlight have changed over time. Examples exist of archaeological approaches catering to ideologies or providing intellectual support from all shades of the political spectrum. In Argentina for example we find in 1960 the Commission for Scientific Research in Buenos Aires publishing racist archaeological literature from Milcíades Vignati proposing the need to limit 'invasive' indigenous immigration into the Buenos Aires province, while only a decade or so onward the archaeology and anthropology departments of the major research universities have forthrightly aligned themselves to the burgeoning 'socialist revolution' sweeping Latin America, going so far as to publicly define their discipline as "anthropology serving the people". (POLITIS; CURTONI, 2011).

Understandably the inclination or possibilities of archaeological research positioning itself into an area of study with political energy, either left or right-leaning, is very much dependent on the larger political and social milieu of the day. Generally speaking, academia as a whole operates under the shadow of enormous political pressures and ideological headwinds. Though it may often act as a sanctuary of unpopular, taboo or prohibited ideas, it is not entirely disconnected from the changing dynamics that define both robustly democratic or aggressively

authoritarian political environments. Archaeology is not immune from influences and expectations in this regard.

In Argentina, the 1916 rise of the *Partido Union Civica Radical*, the ensuing 1930s military coup, the 1946 election of Juan Peron, his 1955 overthrow, the 1958 democratic election of Arturo Frondizi and 1962 military overthrow of that government each sent shockwaves of sudden change throughout academia. Very often these top-down changes were accompanied by quick dismissal and adoption of new personnel in academic leadership positions, as well as the formation of new government supported research bodies meant to reflect the ideological bent or strategic aims of the current political class. (POLITIS; CURTONI, 2011).

Brazilian archaeology has had and continues to face its own unique challenges, many related to the political will of the current government, among many other factors:

> The large size of the country, the lack of resources and government support, the difficulties of working in tropical environments, the lack of monumental architecture, and Brazil's being neither a Spanish- nor an English-speaking country have all been thought of as shaping Brazilian archaeology and its failure to integrate into a larger, Latin American or international context. (BARRETO, 1998, p. 574).

Aside from these nationally iconoclastic factors informing the development of Brazilian archaeology, much like in the case of Argentina, the trajectory and orientation of the discipline has been undeniably shaped by notable waves of foreign researchers bringing with them their theoretical models and associated methodologies. In Brazil, the instance of imported influence that are most notable and persistently felt is firstly that of the French couple Joseph and Annette Laming, who in the 1950s and 60s, through their extensive excavation of coastal shell-mounds, established an on-going emphasis on single site analysis (at the expense of larger regional synthesis of data), a doubling down on the insistence of an absolute *positivist* approach (essentially excluding wider interpretive models), and also the use of French-derived paleolithic classificatory models *via* Brazilian artifacts. (BARRETO, 1998; MAZZ, 2005).

The secondly great academic intrusion into Brazilian archaeology came a bit later (1960s-70s) when the American-led PRONAPA (Proyecto Nacional de Pesquisas Arqueológicas)

project was implemented by the Smithsonian Museum and Brazil's newly formed federal research agencies. A complicated mixture of a violent political regime, outsider foreign meddling and money, and truly valuable research results have made the PRONAPA inclusion in the Brazilian archaeological circles naturally controversial until today. (HILBERT, 2007; FUNARI; FERREIRA, 2006).

Headed by North Americans Clifford Evans and Betty Meggers the project was the first nation-wide attempt at a synthesis of archaeological data and with Smithsonian backing, it was able to undertake excavations and analyzes on a scale not previously possible in Brazil. However the emphatically 'apolitical' stance of the research questions and results (part of the project's intentions) and the overuse of organizational concepts like artifact 'phases' and 'traditions' at the expense of more processual or structural explanations have left the ambivalently felt, but very real influences of PRONAPA lingering up to the present.

Since at least the time of the Empire, political and state-sponsored priorities of 'resource exploitation' and 'national identity building' have had an outsized influence on Brazilian archaeology, emphasizing the association with geosciences and anthropological taxonomy, respectively. (FUNARI, 2006; MILHEIRA, 2001; MAZZ, 2005). Both characteristics continue to exert a strong influence on the way research in the area continues to be framed.

Uruguay, being so much smaller in scale and scope than its neighboring countries, has not faced the same magnitude and array of logistical challenges that come along with the massive research diasporas under consideration in Brazilian and Argentinian contexts. It's intermediate position geographically between Spanish and Portuguese America has also produced parallel developments in its own history of archaeology. The development of the discipline there is marked by a strong and direct influence from the German-inspired diffusionism of the 'Escuela de Buenos Aires' from Argentina, while a contrasting theme of franco-indebted methodology has run through Uruguayan archaeological approaches. These French aspects, also strongly felt in some Brazilian contexts, manifest themselves as a 'humanist' approach, linking archaeology to anthropology and ethnology (informed by the work of Paul Rivet); structuralist interpretations of rock art symbology, exacting 'ethnographic excavation' techniques (based on the precedents set

by Leroi-Gourhan); and detailed lithic typologies based on French models used in european prehistoric contexts. (MAZZ, 2005).

Perhaps unsurprisingly, the archaeology of Uruguay presents itself as a much smaller, but importantly representative 'middle range' between the historico-cultural pedigree of Argentinian archaeology and the processualist, North American-influenced Brazilian counterpart. Importantly, there are many examples of exceptions to the trends on either side of the Plata River — heterogeneity is alive and well in all three regions.

Another important historical development that all three of these countries do share in common is the experience of a devastating and ultra-violent period of mid-century military dictatorship. These national traumas certainly left their scars on all aspects of intellectual and academic life, including the discipline and direction of archaeological pursuits.

> [...] the following era, corresponding to the military dictatorships, was lacking in ethical considerations. There was a greater preoccupation with the quality of archaeological data and with care in the application of techniques and procedures with which to produce that data. Nevertheless, the backdrop of the military dictatorships gave rise to a general suspicion concerning theoretical principles and the interpretation of the archaeological data, sentencing the discipline to a Spartan and ascetic activity of description and classification. (MAZZ, 2005, p. 41).

Perhaps in a very real sense these tendencies developed out of political necessity and survival, are still evident in the patterns of method and theory that have predominated in *basin archaeology.*

Tragically, another crude reality that all three countries continue to face is the on-going and rapid destruction of the remaining archaeological record. The fragile material record is at the mercy of vandals, inadvertent destruction from agricultural practices and development projects, and as Uruguayan argeologist Camilia Gianotti makes plain, unscrupulous 'collectors':

> This looting has been developing in a systematic way for years, but in recent years we have witnessed a worrying increase in it, and that is made visible in the increasing number of collectors who fatten their collections year after year without anyone or

> anything to stop them. The problem is even greater, when we see that the traffic and sale of artifacts to Argentina, Brazil and European collectors has intensified in an alarming way, reaching such a point that alerts are put out from the most wide-known media outlets. (GIANOTTI, 2005, p. 150).

While federal laws are in place to protect archaeological remains as the shared heritage of the state, enforcement is limited and uneven, leaving the pursuit of archaeological information in a constant race against many forces outside its control.

It must be mentioned here, that Paraguay presents a unique national case of an area that has largely escaped the same systematic archaeological research traditions undertaken in the rest of the *basin* countries. Not having the space or proper resources to explain this glaring absence of a strong Paraguayan presence in the region's archaeological discussions, especially considering the sizable indigenous populations of its inhabitants, this project will simply emphasize that this part of the area deserves much more serious consideration and its own account of the country's archaeological heritage. Authors such as Jorge Eremites de Oliveia (2019) have demonstrated that while calling itself nationally 'The Land of the Guarani', Paraguayan authorities have in fact mounted an on-going and systematic campaign of cultural and political repression against its massive amerindian populace, and perhaps this is linked to its notable lack of a clearly articulated archaeological tradition.

1.3 DEFINING INTELLECTUAL APPROACHES:

Considering the enormity of options available when developing an approach towards humanity's material past, it's not surprising there have been dozens upon dozens of definable 'schools' regarding the ultimate aims of the discipline and how to best organize and explain the data. Many of these intellectual traditions have been associated with specific nationalities (the german, the americanist and the like), usually because certain theorists or researchers important in the particular vein hail from these countries. Others are more clearly linked to an 'emcompassing' body of theory that is then applied to archaeology (evolutionist, Marxist, feminist, etc). Since the categorization and even names of these intellectual traditions — some self-identified, others ordained from the outside — vary depending on the nomenclature and

periodization in 'history of archaeology' studies it is best in this brief review to try and define the major identifiable 'schools' of archaeological thinking that have most informed, engaged with and, at times, developed out of *basin archaeology*. However, while the core of this text is indeed a comparison and analysis of theoretical approaches in the region's archaeology, it does not focus nor depend on the categorisation and vernacular of the generally recognized schools of theory, as delineated in a typical *history of archaeology*. They are useful to keep in mind along the way to provide some historical contextual 'clues' about why certain research questions are more likely to be asked and their concomitant methodologies employed.

When taking measure of *basin archaeology* as a whole over its varied and rich history, and not taking into account specific national trends, we can review four major archaeology schools or vestigial influences of these approaches that appear in evidence, to varying degrees depending on the country or researcher: *the historic-cultural approach, processural (New Archaeology), Latin American social archaeology* and *ethnoarchaeology.* Though these are by no means the only 'schools' of archaeology that have made their mark in the regional practice and theory, they in essence illustrate the variety of research questions being posited in the archaeology of the area and shine a light on how lines of research come to be dominant in institutional, intellectual, and historical contexts.

1.3.1 THE HISTORICO-CULTURAL APPROACH: ARCHAEOLOGY AS HISTORICAL NARRATIVE

Latin American archaeology was certainly not unique in being heavily indebted to history, as a discipline on which its foundations were set. This was to have profound implications for the region's archaeological approaches and framing of its research subjects that are still present today.

When we discuss history as practiced in the 19th century — when archaeology as a recognizable endeavor was just taking root in the *basin region* — we are referring to history as narrative. It emphasized events, individuals and nations (often with a heavy military bent) to tell a linear story of the human past, generally with the underlying meta-concept of *progress* ever

present. It was an insistently teleological discipline and therefore restrained in terms of likely questions that would be posited and possible explanations of the evidence as it was uncovered. Justifications for colonialism, social darwinism, the concept of historical progress and anthropological taxonomy all worked together to support the claims of the others. When applied to prehistory, 'development' was baked into the language used to frame the subject matter and limited the interpretation of events to this narrative of human progress:

> A lasting legacy of early cultural evolutionist thought is the tendency to approach long-term trajectories of cultural change as accretive and progressive. Important intervals of change are marked by the addition of new cultural traits or forms of behavior to a relatively impoverished ancestral substrate. Because the appearance of novel characteristics is often used to define new stages or phases, change is recognized as a transition from one state or taxonomic unit to another. [...] The notion that cultural evolution occurs mainly by the addition of new traits implies that earlier stages are less developed and less diverse than later ones. This again tends to discourage the investigation of evolutionary dynamics within earlier cultural phases. (HOVERS; KUHN, 2006, p. 3-4).

This Christian-endowed historical narrative with both teleological purpose, and also the beginnings, middles and ends demanded by a narrative structure needed each and every human or group of humans to be a character in this unfolding drama. The model of the categorization of peoples into 'Old Testament'-like *tribes* — and later on, ethnic groups — appears to have been a given in this narrative-oriented approach to humanity's past.

A representative regional example from the *basin* are the artifact-based assemblage 'traditions' of Umbu, Camburi and Itapui groupings as discussed by Moreno de Sousa and Okumura (2017) in their review of previous research literature and the origins and problems of such retrospective denominators:

> The origin of the Umbu Tradition definition, and the association of sites to this archaeological culture, is related to the first systematic, large-scale studies in Brazilian archaeology that emerged during the 1950s and 1960s, carried out by *Programa Nacional*

> *de Pesquisas Arqueologicas* (PRONAPA, 1970). [...] Material culture assemblages, especially pottery vessels and lithic formal artifacts were classified mainly by the size, shape, and decoration, as well as types of artifacts and the site settings. A new “archaeological tradition” would be created for each type identified, and the new assemblages presenting the same types were associated (with) these ‘traditions’. (MORENA DE SOUSA; OKUMURA, 2017, p. 1).

The danger here lies with the descriptive ambiguity between ‘cultural groups’, societies and ethnic conglomerates that may have identified themselves as such (“us”), and the after-the-fact *traditions* — based mostly on technological details — that researchers create for their own demands of registration and clean categorization. Once the new ‘cultural group’ is baked into the literature it can take on a significance or sense of cultural rigidity that may not reflect the reality of the past. This is very much a question of the research ‘*culture’* (described from the outside) versus the original culture (as lived out in day-to-day life) of the people being researched. (CARNEIRO DA CUNHA, 2009). Trying to determine just how much they do or do not align can be further muddied if the research-derived monikers for artifactual assemblages become conflated with cultural identity markers. This could even produce archaeological analytical ‘reverse engineering’ where explanations must bend over backwards as new finds conflict with the previously established typological sequences and groupings; although sometimes fitting the square pegs into round holes reaches a breaking point where, thankfully, archaeological assemblage groups do sometimes go out of use due to their compounding dissonance with the data (see description of the Humaita Tradition in Moreno Da Sousa and Okumura’s 2017 paper).

Perhaps the greatest vestigial legacy of the historico-cultural approach is the continuing teleological focus on discussing the relative ‘complexity’ of societies, which is defined as the quantity of and dependency of constituent parts of the whole. (ACOSTA; LOPONTE, 2013). The direct correlation between diversity of material manifestations and cultural complexity is a presupposition based well within the european religio-historical concepts of continual human progress and development *towards* an end. The more recent nonlinear dynamics developed by chaos, complexity, and quantum theories, which have been largely adopted by the scientific

community, have not yet been fully incorporated into archaeological explanatory models and language. (MCGLADE; VAN DER LEEUW, 1997). The fact that instability, phase changes, spontaneity, and cultural incoherence may contribute as much to understanding the archaeological record as the desire for order, narrative and evolutionary coherence will certainly change the nature of archaeological explanation in the decades ahead.

1.3.2 PROCESSUAL TENDENCIES: ARCHAEOLOGY AS A SCIENCE OF PROCESSES

In the 1930s, the 'Vienna Circle' of amateur european philosophers developed an insistent and clearly constructed model for epistemological practice (gaining knowledge) that became known as *logical positivism* and, later on in the 1950s, as logical positivism/empiricism. This new positivism would have a profound impact on both science and the humanities alike. (GIBBON, 1989). Their main claim that, *"Only those things which we can be absolutely certain can be counted as knowledge",* meant that the momentum of the new intellectual movement demanded an amputation of the narrative-based, *long durée*, sweeping teleological claims that archaeology had been making about human 'progress' and its multiple manifestations. Instead the emphasis was towards exacting data collection, precision of language (numbers are preferred whenever possible) and a hesitance towards offering casualty models that are, as a rule, speculative. Because the uniquely human practices of theology, ethics and symbology were generally too nuanced or complex to be translated into a mathematically exacting language they were set aside in favor of human behaviors that could be more accurately measured: population demographics, technology development, resource exploitation and cultivation practices. It was now assumed that human activities and their development as mappable and logical systems that could be understood and registered in sequence if enough data (in the form of material evidence) was collected in a systematic way. (HILBERT, 2001).

Any statement or generalized proffered *theory* regarding any of these practices had to be supported with obvious and directly-associated data points to be considered worthwhile:

> […]for example, a theory might include the term 'intensive agriculture'. Although the term is most frequently defined with reference to observable human behavior,

> archaeologists must provide an interpretation in terms of archaeological 'observables' such as irrigation ditches, for, as archaeologists, they cannot directly observe past human behavior but only its byproducts. These 'translations' are necessary, for it is the propositions expressed in these translated sentences which are tested against reality for the purposes of evaluating theories in archaeology. (GIBBON, 1989, p. 20).

Taking two cues from the hard sciences — that of heavy data collection and repeatability as proof — it seems unsurprising that in the 1950s-1960s processual archaeology, which relied on both ideas, would set a new standard and theoretical framework in archaeology worldwide. Comparing deep data sets from archaeological finds from varying locations and cultural groups one could develop human behavioral models for universal practices like animal butchering, lithic workshops, waste sites, construction, etc. In the process of deemphasizing the seemingly unmeasurable (i.e. individual ontologies, theology, politics, sexuality and the like) archaeology came to look more like a branch of *natural history* with the behavioral traits of homo sapiens as one amongst many species and mappable natural phenomena. The emphasis was away from *cultural history* and towards finding generalizations and regularities regarding *cultural processes*: "[...] a materialist, functionalist pursuit of paleoeconomy, paleoenvironment, and paleoecology with subsistence systems occupying center stage." (WATSON, 2008, p. 30).

This is a fascinating turn of epistemological events in which the demands of the research framework come to define and demarcate the limits of what aspects of human history become emphasized and discussed. This 'archaeology as natural history' is a powerful force in studies today and especially in the *basin* research milieu, where obvious semiotic archaeological evidence is harder to notice or come across compared to some other regions, it maintains a strong hold on the questions asked and answered sought in the archaeology of the region. This will be shown in the case studies below.

1.3.3 LATIN AMERICAN SOCIAL ARCHAEOLOGY: WHERE SOCIAL ACTION AND ARCHAEOLOGY MERGE

The concept of *scientific colonialism* is a well-established and fully recognized reality of outside researchers ‘describing’ and ‘explaining’ their cultural objects of inquiry from a blatantly privileged and ontologically-imbued position. (NICHOLAS; HOLLOWELL, 2007). In archaeology, this epistemological confrontation takes on a new level of complexity as the material remains under the interpretative lens of the researcher often have descendent claimant communities with their own accounts, rights of access and ideas regarding the very same materials. When the explanations don’t align, how do we make sense of these contradictions and does either sides’ case innately deserve differential treatment?

The fact is that the research frameworks and self-imposed epistemological restrictions (i.e., demands and weaknesses of science-based thinking) of the archaeologists often remain odd bedfellows with the variety of explanatory models in use amongst descendent communities. If we look at research fields outside of archaeology, for example comparative religious studies, studies of political ideologies, history of fashion, evolutionary psychology, we can safely say archaeology is not alone in offering an explanation of human behavior that is often sharply in contrast with the explanations offered by the research subjects themselves. In this sense the equilibrium between offering explanatory ‘inclusivity’, while at the same time maintaining scientific ‘integrity’ has been attempted in various ways.

At first it appears to be an intractable situation as the *meaning making* of both systems do not comport. Some of the offered solutions have been to offer parallel explanations in the form of *multivocality* or oral histories and ethnoarchaeological voices as addendums to the archaeological results, but I would argue that meaning making systems are not always, nor should they necessarily be forced into compatibility. Just as an opthamologist would not prescribe two grades of lens for the same patient’s visual deficients, perhaps explanatory frameworks take on their unique forms exactly because they are tempting to answer different kinds of questions. In this sense, it seems more honest, intellectually and ethnically, to allow the space for multiple epistemological to co-exist, independently and complementary, but not necessarily aligned. Each societies’ body of ‘knowledge’ plays by its own rules, which come out as its historically unique teleological requirements.

In Latin America specifically, and especially in academia, the deep historical scars of colonialism and postcolonialism are quite evident and often at the forefront of many intellectual discussions, taking the form of subaltern, neocolonial, or feminist strains of theory and method. However, the contradiction lies in the fact that even though these topics are thoroughly discussed, often with the best of intentions, the representative voices of the communities being intellectually protected and defended, are very often not present in the debates. The projection of assumed positions and potentially harmful, although well-intentioned, side effects can be produced.

With its dramatic and often times tragic modern history, including the aforementioned installation of brutal military dictatorships in many countries (often with the direct assistance of foreign quasi-imperialist forces — the United States), and with worldwide recognition of its perennially threatened indigenous communities, South American archaeology often pays required lip-service to the championing and protection of the socially oppressed, regardless of the degree to which the specific study is legitimately linked to these important issues. Anthropology, ethnology and archaeology appear to be interwoven into a complex, socially-driven relationship, but the ideal of synthesizing their disparate currents of knowledge remains an unfulfilled project. The continued presence of *scientific colonialism* in Latin America is not due to any malevolence on the part of the researchers, but product of the sheer moral, epistemological and cultural complexity of attempting to bridge such large chasms in ontological realities.

Multivocality in archaeology, as championed and put into practice by Ian Hodder (2008) and others, acknowledges the need to widen the scope of epistemologies to include those explanations from outside the academic lanes, but it remains to be seen how far archaeology, as a western, science-based discipline, can go in this direction without loosing the foundational structure and scientific ‘rigour’ that defines it in the first place; multivocality in practice is still an experience in the process of delineating its benefits and limits. However, there is no denying the need to investigate contemporarily parallel, but contrasting ontological explanations (if that is the right word) of material culture (‘remains’, again, is a word already couched in the very specific thinking of traditional archaeological practices). This is not to be done merely for

political expediency and out of a sense of 'owing' the indigenous groups a seat at the table, but because these additional bodies of epistemology are invaluable for achieving what ought to be the end results of the human sciences: a holistic, multi-layered, interlocking, rigorously researched vision of humanity's complexity.

By way of analogy, an architectural historian of masonry and a theologically-trained Catholic bishop with a degree in theology would both have remarkably different ways of viewing and explaining the Sistine Chapel. However, without a doubt, both could offer thoroughly interesting and, more importantly, thoroughly 'expert' positions, based within their ontological models.

Latin American *social archaeology* is the term that has come to define a certain framing of the field that emerged in supportive spaces of 1970s and 80s left-oriented national governments. Using marxist dialectical materialism as its springboard it defined itself in direct opposition, theoretically and politically, to the perceived scientific colonialism of epistemological positivism and its foreign peddlers. It's debated to what degree this *social archaeology* was able to consolidate itself as a viable and on-going project and some would argue that its emergence was situational and short-lived, but its recognition as a forthright and vocally alternative to the prevailing 'second fiddle' status of South American research demonstrates the level of skepticism that runs through much of the humanities throughout Latin America. The factors that have been recognized as contributing to its inability to become *de rigueur* throughout the region include the volatility of political support at national levels (federal bodies often set the parameters of the general permissibility of research approaches though funding), but also the "lack of a clear methodology that links theory with practice" in a normalized and explicit way. (OYUELA-CAYCEDO et. al, 1997).

In terms of the *basin region,* social archaeology's presence was perhaps more greatly felt most formally in Argentina than the other countries of the region, but in general archaeologists working out of all the regions share a strong awareness of the reality that their work is conducted in the context of society with enormous imbalances of political power and resources throughout the strata of society. This constant and largely accepted understanding that archaeology does not pursue its aims in an apolitical vacuum could be seen as a direct descendent of the more

formalized Social Archaeology, even if the originally sweeping goals of the original doctrine did unfold as planned.

1.3.4 ETHNOARCHAEOLOGY

Given much of Latin America academia's social self-consciousness regarding the on-going struggles and discussions about the protections for, dialogue with and appropriate levels of integration with the continent's robust and multitudinous indigenous citizens, it seems, in retrospect, that ethnoarchaeology, after it emerged as a viable method in the 1960s, would find an enthusiastic group of researchers in the region eager to apply the approach.

According to Argentinian archaeologist Gustavo Politis (2015, p. 44) ethnoarchaeology can be defined as, "the study of the relationship between human behavior and their archaeological consequences in the present". Politis explains the approach in terms of its use and development:

> During the last fifty years, archaeologists have carried out fieldwork basically— but not exclusively— in traditional societies to help answering questions regarding the interpretation of the archaeological record and to develop and refine *analogies*; thus, ethnoarchaeology was turned into one of the main sources of archaeological analogies. (POLITIS, 2015, p. 42). [italics added]

The twice-emphasized concept of analogies here is key. In archaeology, no two excavation sites or artifact finds are ever identical (i.e. they do not take place in a controlled laboratory like the *hard sciences*); therefore comparative analysis always takes on the form of analogous modeling. By comparing evidence that is *alike*, especially when considering the surrounding context, claims can be made about what is *likely.* The most robust the data (when collected and presented transparently), the stronger the claim — in this sense, ethnoarchaeology is not in the business of proving truths, but building cases about social behaviors:

> As social structures are only manifest in open systems that exist in particular historic contexts, decisive tests of theories are impossible. We may be able to explain past events precisely and accurately, but our capacity to predict remains rudimentary. While the validity of claims is subject to stringent criteria of assessment, proposed definitions of the real and theories about the nature of society and its past are ultimately accepted and rejected on the basis of their explanatory fruitfulness or power. It is this rather than predictive or, in the case of archaeology, retrodictive accuracy that decides which of a set of competing models becomes, for the time being, theory. (DAVID; KRAMER, 2001, p. 36).

Upon first glance, ethnoarchaeology may appear as though the researcher is studying a living society to gather information related to that very society's own past, but this is generally not the case. Ethnoarchaeology relies on analogy of behaviors, cultural practices and lifestyles and the subsequent effects on the material remains. It's just as likely that a researcher may be making the case for these parallel practices between cultures as far removed geographically as they are temporally. This is a decidedly ahistorical branch of archaeology in that it is focused on understanding processes, behaviors and beliefs, rather than remaining affixed on constructing a solid historical narrative. In this light, we can view ethnoarchaeology as an extension of the processual tradition, with the welcomed inclusion of lifestyles (often 'traditional') contemporaneous to the researcher acting as epistemically rich guideposts.

In some of the ethnoarchaeological projects reviewed in the text below (see comments on research by Mazz, Politis, Oliveira, and Silva below) we find the researchers using data derived from cultural groups quite unassociated and geographically remote from the societies represented in the archaeological finds to develop their theories about the archaeological record.

1.3.5 ARCHAEOLOGY AND ITS STAKEHOLDERS

One last sweeping consideration that must be continuously kept in mind regarding archaeological knowledge derived from any of the aforementioned approaches is the final intended destination of the material culture remains and the accompanying analysis. Archaeology can be justifiably studied historiographically as a special body of techniques for reconstructing past(s). Therefore, like any manifestation that history takes on, the question of points of

perspective, collectivity, divisions and ownership of the past are a constant presence. Archaeology, especially considering its high commitment in time and resources, is assumedly pursued with an awareness that it contributes in a meaningful way to some greater product regarding humanity's self-understanding. But because there is a material element (physical stuff) involved, there is the added complication of how this ever-growing body of cultural evidence should be best cared for, distributed, displayed or explained.

Most modern nation states have sought to codify the broad outlines of material culture remains into law and the *basin* countries discussed here are no exception. The language of these laws is often imbued with the rather abstract (and relatively recent) notion of *heritage,* a concept that is etymologically tied to the idea of a shared property; but in this case, property that is directly associated with its relationship to the way in which a group of people, an ethnic, cultural, or in this case, a national polity, views itself and its past. As many scholars have pointed out the creation of a historical narrative, and the *heritage* that supports it, is an on-going and dynamic process. What elements that are included and protected within that corpus of a shared identity is a highly contestable issue, and depends to a large degree on what aspects of a region's past interested parties are hoping to either highlight or downplay.

One aspect that is equally shared amongst the *basin* political nations is highly disrupted, violent, contested and on-going struggle to define the legitimate claimants to the national identity. The Colombian fissure and subsequent clashes of cultures and motives alone suffices to create pronounced ambiguity in the sense of the correct, appropriate and accurate construction of a historical or archaeological narrative that could equally be possessed by all modern inhabitants. There are hundreds of distinct indigenous histories, the perspective of those who claim a European *heritage*, the descendents of forced labor populations (African mostly) and also groups who largely associate with the more recently devised political nationhood (Brazilians, Argentinian, etc) as currently delineated. In this infinitesimally complex cultural and social jigsaw puzzle there is likely to be some serious push-and-pull regarding what heritage model should be prioritized to offer stakeholders something concrete upon which to build a cohesive identity:

> […]heritage was linked to territory and to memory, which both operated as substrata of *identity,* that 1980s keyword. But there was nothing obvious about this identity. It was an identity aware of its own insecurity, teetering on the brink, or even already to a large extent forgotten, obliterated, and suppressed: an identity in search of itself, to be unearthed, pieced together, or even invented. In this sense, heritage came to define less what one possessed, what one *had,* than what one *was,* without being aware of it or without having been in a position to know it. (HARTOG, 2003, p .151).

At the conclusion section of this paper, some proposals will be offered regarding perhaps why and how certain archaeological approaches and subjects have been favored over others in the complex *basin* region. Not from only a practical perspective — which have already been addressed above — but from the perspective of *national heritage*, *identity complexes* and the influence of *presentism*, which recognizes that archaeologically (and history in general) is a mirror that often reflects as much about the present as it is ostensibly concerned with the past. (HARTOG, 2003; KOHL; FAWCETT, 2000). Now we move to the question of what I am calling epistemological choices in archaeology; a strategy for us to arrange *basin archaeology* along a spectrum of methodological attempts to *know* dramatically diffuse ontological aspects of past human history.

THEORY AND METHODOLOGICAL DECISIONS IN ARCHAEOLOGY

2.1 EPISTEMOLOGICAL CHOICES: DISTINGUISHING BETWEEN OBJECTIVE AND SUBJECTIVE REALITIES

Over decades of discussion in theory regarding material culture studies and archaeological interpretation, a tendency has existed to defend a position on either side of the spectrum regarding just how much information could be or should be expected from the material remains of the past. These positions range from the full-throttled semiotic optimism of Clifford Geertz (1973), who sees the potential that artifacts, if understood in *thick description*, could quite literally be read as a language containing its own vocabulary, to the interpretively frigid position that objects should not be *re-read* into at all, and would be best taken at their face value — in other words, that their initially prevalent features and blatant purpose of use is likely the most instructive information they have to offer: “That a boat, for example, is mostly significant for what it is - that is, being a boat.” (OLSEN, 2010, p. 23).

Rather than taking a defensive stance on either side of this on-going and circularly symbiotic discussion, this paper asserts that both versions of understanding an object are equally and concurrently valuable, but must first be identified to be understood to the fullest effect. They come across as being at interpretive cross-purposes only because they are generally pursuing different epistemic goals. The confusion and theoretical abrasion caused by their parallel usage can be eased greatly by defining epistemological categories more candidly and not denying the other’s validity.

Borrowing an arrangement of terms from philosopher John Searle (2015), there is the possibility to gather valid epistemic knowledge of both ontologically *objective* and *subjective* realities. The ontologically objective reality is that collection of data points which exists for all people and non-people equally and universally: measurable qualities, chemical properties, biological processes (births and deaths), the behavior of celestial and geological bodies, etc.

Certain types of archaeological research would certainly be tuned towards gathering as much of this handily measurable information regarding the human past and its associated environments as possible. This research front is a major logistical challenge and costly, but an invaluable body of information for constructing a view of the past that likely resembles some form of reality. It almost goes without saying, but of course even the most well-intentioned and honest pursuit of gathering archaeological data of this "measurable" sort is inundated with research biases, human error, skewed data, loaded language, and absent representation of important evidence that is baked into any research undertaken by folly-prone and subjectively positioned researchers. But that reality does not negate the fact that even information tarnished with the debris of inevitable bias can bring us closer to knowledge; inherent partiality does not necessitate complete abandonment of the project of building up cultural and historical understanding across the archaeological record.

If we can accept that this ontologically objective reality does exist (that, e.g., the height of Mt. Everest, the temperature at which water boils, and the functioning of the central nervous system all remain the same across cultural "boundaries"), then what do we mean by *subjective realities* and what is their importance? In short, ontologically subjective realities are unique to each individual and, to a lesser extent, to each group of individuals that share cultural or societal links. They are composed of the *inner* experiences, fears, desires, doubts, and values (both conscious and subconscious) that inform our *outer* behavior while we go about our life in the ontologically objective world. It is hard to overstate the exponentially more challenging prospect of pursuing data of individual internalized ontologies, but building an epistemically objective study of these subjective individual truths is by no means inherently impossible. However, as Searle points out, simply because the experience of pain is subjective in nature, it does not give the doctor license to ignore the very real character of that ontologically private experience. He goes even further to claim the *subjective* experience of pain is something distinct from the neural firings causing that state. Searle (p. 116-117, 1998) also categorizes these two kinds of knowledge as *observer-dependent* and *observer-independent* features of the world. Both features are equally true, but require different approaches to investigate.

This bifurcation of epistemology can be applied to archaeological undertaking, albeit, with much more distance in space and time between the subject (the past individuals represented by scant material remains) and the object (the researcher with their own private ontology as well). While neuroscience is always bringing us closer to demonstrating this *subjective* reality as perhaps a complex combination of *objective* cerebral, chemical, and electrical processes, the archaeologist does not have the luxury of pursuing their subjects in this clinically-derived way. The archaeologist, much like the historian, must be humble enough to only ever *build a case* for their *epistemically objective* descriptions of *ontologically subjective* realities of the past. It is a project without end, but endlessly intriguing.

This ontologically bifurcated positioning is not meant to undermine or mutually exclude the adoption of a multivocal intellectual openness. However, rather than an insistence on developing a bridge "between rationalism (universalism) and romanticism (contextualism)" (HODDER; HUTSON, 2003, p. 212), it may help to acknowledge both kinds of data have their own idiosyncrasies and, therefore, require different investigatory tools and terminology. Bruce Trigger (2008, p. 191) understandably regrets that "archaeologists have not yet freed themselves from the cynical privileging of rationalism and evolutionism on the one hand and of romanticism and historical particularism on the other"; but if Searle's scheme is to be applied archaeologically, we can view this not as a problem of privilege or preference, but simply a matter of pursuing separate bodies of knowledge. The confusion is caused by ignoring the distinction between internal and external realities — realities that constantly play off of and inform each other, both nonetheless require their own unique approach(es).

Starting from this premise, both the ontologically *objective* and *subjective* fields of knowledge would benefit from and indeed demand the harmonies of a multivocal chorus of interpretation. This epistemic cosmopolitanism would enhance the robustness of either branch of ontological inquiry. Nevertheless, by increasing the complexity and layeredness of the interpretation, the organizational challenges would likewise increase, as Trigger (2008, p. 202) makes clear: "Multivocality enhances rather than relieves the need for archaeologists to weed out erroneous assumptions and interpretations and to synthesize divergent viewpoints to produce more holistic explanations of the past".

The single most important contribution of multivocality offered to archaeology has been the hope that ethics will be considered an integrated foundation of any research endeavor. From the way questions are formulated and funding is procured to the manner in which data is collected and material is interpreted, preserved, and displayed, the archaeological process necessarily involves living human beings at local, regional, and international levels who all have certain unalienable rights that must be considered and preserved. There is no pure “objectivity” of knowledge that should trump this requirement, if pursued honestly and with this goal in mind. Michael L. Blakey (2008, p. 26) has suggested the term *ethemology* (epistemology + ethics) for this morally-oriented body of data. It may slow the process of doing the archaeological work, but that is the cost of working firmly within the humanities.

The on-going intellectual project to amplify understanding and empathy across historical time and space is laudable and brazen in its ambitions of uniting collectivity and multivocality. Critiques of the project should be readily welcomed, however, as they will only strengthen the epistemically weak links within the humanities and offer opportunities to creatively improve the methods and theories that are in a constantly deepening dialog. But to deny the project itself because final answers will not be readily forthcoming or biases persist would be a tragic and cynical academic and epistemic maneuver. Archaeology is a dialectical discipline, and there is absolutely no shame in working at that level of intractability. It offers a fountainhead of refreshingly neverending knowledge about the very essence of being human and a refuge of nuance that exists beyond the increasingly binary models of information harvesting and digital dispersal. Its practitioners are often criticised for mythologizing, fetishizing, or romanticizing their subjects in their pursuit of the past, and certainly this should be avoided as much as honestly possible, but mystery is not a dirty word in the pursuit of layered meanings. At the core of archaeology is exactly this profoundly *mysterious* interplay between humanity, the materiality in which it finds itself, and the remains by which it has expressed itself throughout all time. It is a philosophical pursuit of the physical.

2.2 THE EMIC/ETIC REALITY: ACKNOWLEDGING AND ADDRESSING BIAS IN ARCHAEOLOGICAL RESEARCH

Before parsing out the unique challenges confronted when pursuing archaeologically-derived knowledge of either the *ontologically objective* or *ontologically subjective*, it is useful to explore in a more thorough manner the naturally unbalanced, albeit intriguing, relationship between the pursuer of academic knowledge (the archaeologist) and the pursued research target (the unpresent users, creators, or depositors of the archaeological record itself). Generally speaking, the concept of culture is often used as a catch-all term for the objects, languages, symbols, tools and technologies, shared beliefs, vices and values, and associated behavioral patterns that make up the daily lives of human beings. But culture can also be seen as the collection of those data points when being studied by a second party, generally in an institutional framework and quite removed from the initial life under purview. More ideationally-based definitions of culture are discussed in forthcoming sections of this paper, but here we are including all manifestations of a people's material way of life which is most often where the archaeologists are situated.

This relationship between researcher and research subject in the realm of the humanities is elegantly and helpfully articulated by anthropologist Manuela Carneiro Da Cunha's (2009, p. 67-73) bifurcation of two very different meanings of culture that are at work in a social science inquiry: culture and "culture." The first use, without quotation marks, applies to one's own "equipment of living" (knowledge, inventions, and symbols), while the second use, "culture ," is used in situations that prescribe viewing another (culture) from an outsider's perspective, for example, in research, tourism, cultural predation, and other more benign forms, like simply describing the way another person gets along in their daily life.

It's extremely useful to apply her concept to the field of archaeology, in light of the oft-debated and inextricably complex proposition that the archaeologist puts forth - namely the claim of an advantaged position to offer some meaningful insight into the lives of human societies *via* their material remains. To go even a step further, we should include the diehard *material culturalist* archaeologists, who posit that not only is it *possible*, but it is absolutely *essential*, to include the materially non-human *actors* (things) in any attempt to study past humanity(s):

> Of course, tradition and cultures are invented and societies constructed, but this does not make them unreal or false. Societies or nation-states are not cognitive sketches resting in the minds of people; they are real entities solidly built and well tied together [...] our attention should be devoted to analyzing how these entities (e.g., societies and cultures) are put together and the real building materials — the concrete and steel, rebar and pillars — involved in their construction. (Olsen, 2010, p. 5).

In Da Cunha's helpful schema, the quoted iteration of the word, the *"culture*," is intended as a shorthand to encompass the totality of the lived-in connective tissue of daily human activity. This *"culture"* refers to the material ingredients that surround individuals in their multitudinous and uniquely modified environments and any symbolic resonance that the material may contain. As opposed to a cultural analysis or description from an outside observer, this meaning of *"culture,"* strictly speaking, is firmly situated within the culture-bearers' own ontological context: by way of *their* self-perceived symbolic and linguistic vocabulary (semiotics) of understanding *their* items and environment, and including *their* own interpretation,explanation, or understanding of *their* own actions. In American lingo, we might refer to this as the cultural building blocks of *"the daily grind"* — the day-to-day reality of *getting along* in life, including all of the significances (emotive, neurotic, political, or metaphysical) one may endow the material culture surrounding oneself moment-to-moment and day-to-day. This *"culture"* works on both a highly individualized, personal and more collectively-binding, social level. By way of example, in a stereotypical contemporary-metropolitan-American-capitalist framework, this *"cultural"* luggage would include: the job, the commute, the family, the home, entertainment, significant *touchstone* events (weddings, birthdays, and deaths), religion, politics, and the intractable sex life. Significantly, it would circumscribe principally the ideas and behaviors towards those component parts of life as viewed and explained by the individual participant themself and not as explicated or re-represented by an outside actor.

In theory at least, this definition of "*culture"* does not demand self-awareness. As it is designated as the self-contained cultural *stuff* of each individual society, most of us would generally not view our own "culture" on an anthropological level very often: it is simply what we

do with ourselves when we get up in the morning.Of course, in reality, this sort of purified form of a fixed “set” of cultural behaviors and meanings either *never* exists or doesn’t maintain its form very long, since all peoples exist in a world of cultural *grey areas,* of neighboring influences, exchanges, dialog, and constant modifications.

The archaeologist is most certainly concerned with this *“*daily grind*”* of past peoples’ lives; indeed, the self-prescribed domain of the archaeologist is exactly the “material stuff” left over from this initial cultural (without quotations) existence. In this sense, it’s no surprise that a large body of archaeological work is the detailed examination of the remaining debris of otherwise underwhelming day-to-day tasks. (Binford, 1983). Of course, this focus on materiality is both archaeology’s strength and short-coming — keeping its analysis *grounded* in tangibility; but also, starkly missing from the evidence is the voice or *understanding* of the original creator or user of the item. At the risk of becoming too self-centered: by looking into my kitchen garbage over a few weeks’ duration, you would easily be able to ascertain my conspicuous coffee consumption. But that would give you no sense, whatsoever, of just how much joy, comfort, and hope to wake up and fight for a brighter tomorrow each cup of piping hot joe truly provides me; the ontology would be essentially lost. It’s my ontology and I’m not sharing!

If we go a step further and introduce the added dimension of *distance in temporality*, another level of interpretation riddled with even more possible pitfalls of misunderstanding and conjecture is thrown into the mix. And since most archaeology tends away from modern times (although not required!), this is a research conundrum that almost defines the discipline. We are now looking into the kitchen garbage from another *metropolitan-North American-consumerist* man — except this time the waste is from the year 1940. How do I begin to arrive at an understanding of this man’s *world* (as he saw it) from these remains? Perhaps he was an introspective man who left no journals or diaries, wasn’t fond of taking pictures, and has no descendants. The methodological answer is a simple one: *context*. I need a deep understanding of the rest of the contextual puzzle before I can put these remains in their proper place. I would need a deep knowledge of the consumption behavioral patterns of the times to ascertain are these remains *typical of the times? Unique?* Just like any observational science, the depth and breadth of my data sets will allow my observations to edge towards interpretations of likelihood, and

again, just like in observational sciences, be it astronomy, physics, meteorology, or zoology, there is no absolute certainty — only probability and currently arrived at best explanations.

Let's go a step further — and a bit closer to the example set by Carneiro Da Cunha's original essay — and add a vast distance in cultural ontology into the hypothetical research subject. Again, we are looking at "trash," but now it is the refuse of a 12th-century native american. The home has been covered over by a few meters of soil such that much of the debris is decayed, broken, or otherwise unintelligible without serious laboratory analysis. I can collect intact only the few items that have managed to survive the geologically prescribed abuse of nine-hundred years: ceramics, lithics, stone tools (essentially the items one expects to find on display in an archaeology museum). How much of this man's *culture* (without quotations) is available here? Something? Or nothing at all?

Because each level of additional *context* provides another point of comparison, the fact-gathering efforts in archaeology have tended to pursue patterns. A more macro-analytic, rather than individualistic, approach of sites and remains becomes the norm. This, in turn, changes the tone of the questions as they become more ecological, determinist, political and structural in veneer. In this sense, Carneiro Da Cunha's *culture* is often delivered in a rather de-humanized, processual version of a *"culture"* ,in which the individuals have gone missing; without daydreams, thoughts, fears, romances, and humor, all of the *persona* is removed from the *people*.

American archaeologist Kelly Ann Hays (1993) is a true proponent of the post-processual concept that internal meaning may make itself manifest in material remains. In her essay "When is a symbol archaeologically meaningful?: meaning, function, and prehistoric visual arts", she offers multiple applied attempts at linking symbolic meaning and social function/significance in prehistoric contexts. However, even she admits that no systematic methodology to access such direct correspondence (between meaning and materiality) has truly developed. If this direct exchange between original meaning and material remains were possible, it would be an almost *unfiltered correspondence* between *culture* and *"culture"*; but distinct ontologies, and the fact that a single item rarely has a "single" meaning, even for the same individual using it, makes this proposition very unlikely.

The second of Carneiro Da Cunha's pair of meanings, *"culture"* (in quotations), signifies the view of the *culture* from the outside; when we speak of the *culture* of another using our own words and ontologies, it becomes this second species of the term, or *"culture*." This second use of the word would encompass the total product of the archaeologists' evidence-gathering pursuits: the interpretive work, the publication in defense of a thesis, any and all theoretical hypotheses about the *culture* in question, and the organization of *cultural* objects into categories — categories that the people who originally used the objects were likely to have never used or even considered while they pursued their own *daily grind* of existence.

Here we have arrived at the hackneyed dilemma of the researcher in general (and it's acutely evident in the social sciences): How does the reader of the *"cultural"* analysis parse out the researcher's own *culture* that has made its way into the description and interpretation of the other *culture* under question? The social, professional, and political milieu of the archaeologist has at least some presence in the selection, collection, re-creation, and interpretation of the *cultural* information along every step of the long and winding way.

So as readers *of* archaeology (not *of* the original *culture* itself), we must also consider "the daily grind" of the academic writing their material — just as much as that of the subject matter under investigation — if we are to get anywhere close to an accurate understanding of the texts at hand. For this reason, to approach archaeological subject matters in a meaningful way, one must in tandem also pursue *archaeologists* themselves. (This need applies to all academic fields, but in archaeology it is especially pertinent because the researcher is working *so deeply* within the interpretive arts that an understanding of their own biographies and conceptual idiosyncrasies is essential.

One notable aspect of the material emphasis in archaeology is the selection of the objects from the site during the excavation process. We must always remember they do not simply fall into the hands of the researcher announcing their importance; in a major sense, the importance of any given artifact is not necessarily aligned with the significance that the object originally held to its native user. There is therefore passing of the lens of *objectification*: the object belonged to a *culture*, is now being used as a means to describe a *"culture,"* and, once

inculcated into the new environment of the laboratory, museum, or confines of a dark shoebox, has become an item (with an entirely new significance) in the network of a new *culture*:

> There are three different aspects to object histories and the way archaeologists can view them. The first is the living contexts of the past - what did people do with the object, and how can the life histories of objects reveal the activities and thoughts and strategies of that past society? (Shiffer) produced a division between, in his terms, the 'systemic' context, meaning the living archaeological societies' cultural context, and the archaeological context, which meant the post-depositional phase. In practice, there is another living context, our own, because, as soon as an object is dug out of the ground, it becomes part of our living cultural heritage system and we value or change it, or allow it to be changed by natural processes. (Hurcombe, 2007, p. 38).

This tripartite shuttling of material objects between bodies of meaning has some resemblance to Carneiro De Cunha's concept of cultural "mirroring" or "looping" — an awareness that the various uses of the cultural components can often influence and inform the other, blurring the lines between lived-in *"culture"* and observed culture. Anyone who has been unfortunate enough to absent-mindedly bumble into a tourist-baiting gift shop can recognize this phenomena. Whether in Hollywood, Giza, Times Square, or Beijing, the gimcracks and often-imported doodads that flood the shelves often represent less about the local *"culture"* and more about outsider notions and a demand driven by desired expectations. The business-minded souvenir hawkers sell the tourists back their own fantasies. This foreign body of imported symbolism can eventually become embedded within the local semiotic vernacular and take on a natural enough form to appear genuinely situated. In archaeology, it is a significantly one-sided affair — as generally the originator of the remains is not present for the discussion. One way Ian Hodder and Scott Hutson approach this "feedback" mechanism is simply through a distinction between the *object* (the original object) and the *"object"* (the object as the archaeologist perceives it):

> [...] there is a [...] kind of back and forth motion [...] in coming to understanding, we relate the informant's opinions and views to our own opinions and views. This involves a

> playing back and forth between the social and theoretical context of the interpreter, and the historical or cultural context of the object of interpretation. Both the interpreter and the object of interpretation contribute to understanding, always generating a new, hybridised meaning. In this sense, whether we like it or not, we think ourselves into the past. We need to be aware that we are doing this and we need to do it critically. (Hodder and Hutson, 1986, p. 196).

What Hodder prescribes in methodology is exactly what makes Carneiro Da Cunha's dual-branched theory of culture so attractive in theory. She offers us hopefulness in the pursuit of human understanding. We do not have to give up on the project to more intimately "know" (*"culture")* or even "feel" *(culture)* our fellow human beings — it is a worthy goal and essential to our survival and well-being as a species. We also do not have to become an intellectually crazed dog chasing its proverbial tail (or caffeinated researcher chasing a subject of inquiry). We can undertake journeys of inquiry in an honest way by keeping *culture* and "*culture"* clearly defined and attempt to acknowledge their appropriate domains. *Epistemological humility* is not the same as total ignorance, and we should embrace this Socratic ignorance by engaging subject matter straight on and with serious intent, while at the same time fully acknowledging the unlikelihood arriving with anything like a final answer. As Carneiro Da Cunha (2009, p. 95) puts it: "It is in such a world, rich in all its contradictions, that we are happy to live". The responsibility of the seeker of understanding (the researcher, in academic jargon) is to always maintain *epistemological humility* and also, as much as possible, an explicit and clear *intention*. This is important in all fields of inquiry, but quite poignantly in the *social* or *cultural studies* where misrepresentations and misunderstandings (intended or not), as Carneiro Da Cunha demonstrates, are par for the course.

As touched upon earlier, we have not one, but two "intentionalities" we have to address in archaeology: that of the object and its creator, and furthermore, that of the archaeologist(s) giving this object a new "public outing," as well as their own personal, professional, political, and logistical influences that might come along for the ride. (That's some stratigraphy!)

Again, to borrow from historiography, we can here use Kosselleck's idea of the *historically recordable* past versus the ever-present *extralinguistic* factors. The archaeological

interlocutor of materiality is always restrained by language their written language, their discipline's language, etc.). So much of what counts as the reality of the past simply doesn't offer itself to this linguistic recapitulation:

> Historical events are not possible without linguistic activity; the experience gained from these events cannot be communicated except through language. However, neither events nor experiences are exhausted by their linguistic articulation. There are numerous extralinguistic factors that enter into every event, and there are levels of experience that escape linguistic determination. The majority of extralinguistic conditions for all occurrences (natural and material givens, institutions, and modes of conduct) remain dependent upon linguistic communication for their effectiveness. They are not, however, assimilated by it. The prelinguistic structure of action and the linguistic communication by means of which events take place are intermingled, yet do not coincide. (Koselleck, 2004, p. 222).

Seeing as the interpretive creative craft of archaeology is firmly entrenched in the humanities and is very much done by humans (at least for the time being!), it also does not escape the waves of *vogue*-language, neologisms, and pressures, both academic and social, that cause major modifications and sometimes downright mental revolutions in the accepted and expected vocabulary of the discipline. The jargon, buzzwords, and, more importantly, range of possibilities potentially freed up or restricted based on current vocabulary available to the practitioner plays a domineering role. If we survey the century-spanning wayfaring of the archaeological languages of interpretation, we can discover key points where language and, therefore, ideas about material remains have undergone noticeably important re-inventions — it is a field of creativity, not passivity, after all.

Of course, the linguistic devices, the arsenal of vocabulary, and the neologisms of academia that appear, disappear, and sometimes reappear in disguised forms don't factualize or set the wheels of the material in motion (If a tree falls in the woods and an archaeologist doesn't write about it, well, it still happened anyways.) But these language tools *do* offer the only way of providing meaning to the event to anyone *beyond* the actors (human and otherwise) immediately involved in the event. Even a first-hand contemporaneous observer of the event would be using

some body of language, perhaps intimately internal and wrapped in the visual, to construct some kind of self-analysis and perhaps judgement of the event as it's being witnessed.

Yes, the archaeologists define themselves as addressing the *materiality* of human experience (as opposed to the anthropologist, the historian, or the ethnologist), but it still requires language at every step of the way. This fact essentially guarantees the circular semantics of the conversations surrounding and defining the field. Language offers its gorgeously and stubbornly slippery acrobatics (sometimes more combatively "martial arts"-like) into the mix — a contribution to be acknowledged and celebrated, rather than chastised or ignored.

Despite the immense challenges that culturally contextual barriers will always present to the attempts at cross-cultural understanding, it provides some solace to remember that these barriers also exist *within* the original cultural milieus themselves — there is always a degree of interpretation needed and an expected margin of error thereof when culture is in action. In this sense, the epistemic alienness of the researcher is not one of distinction, but of degree. Cultural kinsmen must interpret across baby chasms of interpretation in their daily lives, and cultural researchers, from farway spaces and times, but interpret across monstrously gaping pits of missing information — an exciting difficulty. Karl Popper (1994) emphasizes that if we don't fall victim to the epistemological relativism of the 'myth of the framework', the wider the gap between ontological positions we are able to bridge through the effort to understand 'the other', the more plentiful will be the fruit of our labors.

THEORY IN PRACTICE: CASE STUDIES FROM THE *BASIN*

Now that we have outlined broadly the main theoretical conundrums archaeology faces, and have also considered the profound impact political, cultural and historical context within which the research is being performed, we return to our geographic region of interest — the *bacia de la plata,* the *basin*. Case studies from the area help illustrate some of these broader theoretical questions in the more concrete settings of excavation units, cultural assemblage groups or site mapping projects.

We begin at the far end of the spectrum of fundamental forensic archaeological questions such as: Were people present?, and how long ago?, for a specific region. We then move into the adaptive-heavy studies regarding the technological, architectural, and subsistence practices of various cultural groups, as well as the economic, kinship and political models of their societies, which appear to be heavily indebted to the material and technological contexts. The final batch of case studies engages with the most post-processually inspired studies in *basin archaeology* — cognitive archaeology and archaeology of the individual: What did individuals in past *basin* societies think?

By using 'opening up' these case studies the intention is to illustrate not only how epistemological choices (objective versus subjective realities) play out in real-world scenarios, but also to provide a summary outline of the *bacia de la plata* methodological spread. We will engage the lines of archaeology that are most published and undertaken in the region (often engaged with processual methodologies, which pursuing culturo-historical inquiries), as well as some outlier studies that approach their subjects in refreshing and challenging new ways, that often times lack the methodological rigor that more well-established 'schools' of archaeological research have had the benefit of developing over time.

This text is by no means a compendium of *all* significant archaeology being done in the region today— it is only a horizontal slice of the pie, but aims to be representative nonetheless. The studies have been chosen specifically because of their diversity. In the appendix the

bibliographic prosopography provides more information regarding the broader trends about where the theoretical trends in the region lean more heavily. Neither is this a *history of archaeology* in the region nor a *prehistory of the region* via archaeology. For readers looking for well executed texts framed in this way there are a few history of archaeology texted, generally organized along national lines (see Politis on Argentina, Funari on Brazil and Gianotti on Uruguay), and also broad prehistories of the area (Arno Alvaro Kern's 'Antecedentes Indígenas') although updated and more in depth versions of each species of general history would be a welcome addition indeed.

3.1 *WERE* HUMANS PRESENT?: EVIDENCE OF PAST HUMAN ACTIVITIES

According to its own self-imposed definition, the discipline of archaeology requires that humans or the aftereffects of their presence be involved in the production —be it intentionally or inadvertently— of the material record under consideration. Studies of the past material record on earth that do not involve human presence are the purview of paleontologists, geologists, paleoecologists, and the like. Therefore, before any research subject can be considered archaeological, it first must be established that the involvement of human presence is either confirmed or suspected.

Though this may, at first glance, appear to be a somewhat cut and dry inquiry, we discover in the *basin archaeology* literature that is far from the case. Given that the archaeological evidence of the area is often sparse, very ancient, and/or heavily affected by a variety of post-depositional disturbances from natural and anthropic causes, many of the key areas of interests in *basin archaeology* remain engaged with the very question of which elements of the material record can be considered genuinely archaeological or 'man-made'. We find this discussion entrenched in topics as wide-ranging as the degree to which the composition of earthen mounds or *cerritos* are anthropic; the parsing out of lithic debitage versus naturally formed stones; the possibility that faint traces of pre-columbian causeways can be seen in the landscape; and, in the case discussed below, the likeliness of past human activities on the very biome itself. (CRUZ, 2020; MILHEIRA, 2019).

At this most fundamental stage of archaeological inquiry — the determination of the presence of past anthropic activities — we are squarely in the wheelhouse of the *epistemically objective* — either there were people present or there were not. If this human presence is determined as likely we can begin to inquire as to the specificity of their activities, behaviors or even intentions and beliefs. Confirmed artifacts and their associated sites are isolated clusters clearly demarcating human activity; they make up the bulk of archaeological investigation. However, by looking at the spaces 'in between' the artifacts — at the scale of the landscape — the concept of archaeological 'evidence' is amply expanded; new questions are raised and interpretive models can be developed that go beyond the erstwhile artifact. The landscape as a component to the 'full' archaeological picture has seen it's use wax and wane over the years generally following changes in thinking about how the landscape was either a neutral *tabula rasa*, the primary driver of human behavior, or more *acted upon* and shaped by past societies. (YOFFEE; FOWLES, 2012).

3.1.1 THE HISTORICAL ECOLOGY APPROACH

With the introduction of historical ecology (the study of humanity's interaction with the environment over time) in the arena of archaeology has had a profound impact on the discipline. (BALÉE, 2013). More and more it becomes evident that human societies, including those of the prehistoric past, do not simply exploit and wean themselves on the surrounding ecosystems, but fundamentally transform them — either intentionally or as a byproduct of long-term activities. By looking at current regional ecosystemic compositions in light of this awareness, including the flora and fauna therein, evidence of pre-columbian influence abounds.

Amerindian silviculture, once viewed as highly unlikely in light of the romantic and naive concept of the 'virgin wilderness', has now been recognized as a widespread, sophisticated and on-going sustainability strategy for getting the most out of a managed arboreal landscape. The challenge, archaeologically, is in developing a solid methodology for extracting the evidence:

> Managed forest systems are the most overlooked and least studied form of indigenous plant management. Unlike homegardens or managed fallows, which are highly visible

> and spatially defined, managed forests get lost in what is usually considered natural or primary forest. In most cases, the only evidence that some form of management is taking place is the distribution and abundance of useful trees in the forest. (PETERS, 2000 p. 211).

And to further re-emphasize the methodological challenges facing the research of prehistoric silviculture:

> [...] indigenous systems of silviculture can be very hard to detect. There are no marked stumps, no bulldozer roads, no skid trails, and no straight lines of neatly planted seedlings. If non-timber resources are the product of interest, there may, in fact, be no visible evidence that forest management is occurring on the site. To the untrained eye, the managed and the pristine can easily merge into one. (ibid. p. 204).

The study of anthropogenic forest composition has now become a burgeoning sub-field of South American archaeology famously applied to the forests of the Amazon region. In *basin* archaeology recent studies have focused on the relationship between specific Amerindian groups and the expansion of the highly useful *Araucaria* forest biome; and the research coming out of the team from the Federal University of Santa Catarina, where members of the ecology and history departments are working in tandem, are using a robust and inventive strategy to form their conclusions.

Working from the clear hypothesis that, “[...] floristic composition differs in Southern Atlantic Forests with a high probability of past human activities, and that different cultural groups also leave differing floristic composition and abundance legacies notable yet [...]” (CRUZ et al., 2020, p. 3), the research group makes heavy use of the Niche Construction Theory (NCT). This concept offers that ecosystem *engineer species* — in this case humans — can amplify or diminish species *niches* (ideal characteristics for a certain species to thrive) in an ecological composition; the self-perpetuation of these modifications over time will still be visible in the contemporary environment in the form of recognizable compositional *legacies*. (ibid., p. 1-2).

The study from Santa Catarian looked at the migration and distribution models of two large cultural groups, the Southern-Je and the Guarani, and their association with two distinct ecological and geographical niches: the more temperate southern highlands for the Je people; and the riverine valley floodplains and coastal areas for the Guarani. Since both groups have distinct cultural and subsistence practices it was assumed that their use of and potential manipulation of the local ecology would be equally distinctive based on ecosystem engineering practices.

The engineering in this case could come in many forms, both intentional and unintentional: the systematic burning of retreating grasslands and the distribution of tree seeds in the newly cleared areas in the case of the Southern-Je; the suppression of native seed growth; collection of firewood from certain tree species; and also the transplantation of imported plant crops including fruit trees and root vegetables.

The study used a unique layering of datasets to find correspondence or dissonance that could provide clarity to the complex question of anthropogenic influences on the environment. Firstly, all data regarding confirmed archaeological sites associated with the two cultural groups was used to reliably determine where the presence of the groups has already been confirmed. Then topographic and hydrographic models were run on the landscape and compared against the archaeological sites to get a clear idea of specifically which environmental and geomorphological traits would most likely attract either group; including proximity to coastal resources and forest types. Their conclusion was that, “The most suitable environments for Guruani people were those with proximity to the sea or rivers, while Southern-Je sites were mostly found in elevated areas and near rivers”. (ibid. p. 5). Finally, survey information from the Santa Catarina Floristic Inventory (SCFFI) about current faunal compositions in the region were overlaid with the archaeological and topographic datasets. With these three layers of information now viewed together correlations could be considered.

The primary take-away from the initial study is that there are clearly distinct species compositions associated with the Southern-Je and Guarani areas respectively and furthermore, 29 species from the study have been verified in their use by the groups. The uses are diverse and include: beverage preparation, firewood, construction materials, medicine, and as major dietary staples. While the project is not conclusive, it is the possibilities in research it presents that make

it most promising. It presents the possibilities of a kind of ‘reverse archaeology’ where information of past societies and their distribution may be more evident in the very ecology of the present. This could provide clues and lead to the recovery of material records that otherwise would go unfound. It is a dialectic between landscape and society that is useful for both the archaeologists refining the past and also offers fertile ground for rethinking contemporary concerns of human-ecological balances. Machado and team’s approach goes well beyond the confines of the individual excavation site or artifact assemblage that for so long dominated the attention of archaeological research. This incorporation of both anthropological and earth science into the field allows broader questions about past human activities in the environment to be raised and concerned, the results of which can then be reapplied and provide meaningful context for the individual finds.

3.1.2 LANDSCAPE ARCHAEOLOGY

One name for this approach that has come to the forefront in modern archaeological literature is the concept of *landscape archaeology*. Still quite broad in its intended meaning and variety of applications, generally speaking, it attempts to synthesize spatial information pertinent to the research beyond the confines of the traditional archaeological ‘site’. It’s techniques can be used to explore evidence supporting both adaptive and/or ideological uses of the environment in the past:

> [...] archaeology has traditionally incorporated attention to space and landscape, particularly in what is called settlement archaeology. The difference is that what was once theorized as a passive backdrop or forcible determinant of culture is now seen as an active and far more complex entity in relation to human lives. In part, the change stems from archaeologists’ expanding their interpretive gaze beyond the isolable ‘hot spots’ termed sites, to consider a more comprehensive distribution of human traces in and between loci [...]. (ASHMORE; KNAPP, 1999, p. 2).

Recognizing that societies both utilize and conceptualize their natural surroundings uniquely and circumstantially, landscape archaeology attempts to investigate both cognitive and strategic models of explanation. With the arrival of reliable and more affordable GIS and the increasing ability to cull and integrate large amounts of mapped data — a feat impossible in the era of paper records — it is now possible to apply models such as line-of-sight analysis, least cost-path models, network and geo-behavioral systems analysis to archaeological questions. When expectations from the digital models align with the extant material evidence from archaeological sites, cases can be made about how a given society may have structured itself vis-a-vis the surrounding environs. On the other hand, if the archaeological record and the digital landscape models don't correspond it helpfully renders particular theories about land-use unlikely.

Working out of the LEPAARQ laboratory (Laboratório de Ensino e Pesquisa em Antropologia e Arqueologia) at the Federal University of Pelotas, at the southern edge of Brazil, Rafael Milheira and his team have been at the forefront of using the innovative and multidisciplinary approach of *landscape-oriented archaeology* in the region. Recognizing that the dynamic and complex lagoon and riverine environments often render the archaeological record incomplete and inaccessible due to rapid decomposition, intermittent flooding, and dramatic environmental transformations, Milheria has used landscape modelling techniques and large pools of collected data to form his unique conclusions about the ancient societies' use of space, both terrestrial and aquatic. (MILHEIRA, 2019).

Dr. Milheria recognized the many descriptions of prolific canoe-use and water mobility of the native populations and described by the early European chroniclers did not align with the descriptions in the subsequent archaeological literature. The Charrua and Minuano cultural groups, specifically, were being defined by their use of horses and terrestrial hunting, which were both European habits adopted in a post-colonial context. (ibid). Using freely available GIS topographic and hydrographic data alongside the mapped locations of previously confirmed settlement sites (mostly *cerritos* or mounds of various sizes and uses), Milheira was able to run network analysis and least-cost path models. These techniques use satellite-derived data to offer statistical models regarding the 'ideal' use of the space for the 'least cost' of energy output. It

takes into consideration geographic hindrances such as sloped terrain and environmental barriers such as forests to offer a predictive model. The results indicated that land travel was land travel in general amongst two random points, but the aquatic model offered better access to the most *significant* and populous cultural sites. Milheira points out that this could be due to the attraction of being so centrally located, but also the possible political implications of the site's importance as a place of *control of movement* in a water-based civilization.

This study and others in the area make it clear that site-specific archaeology must be recognized for what it is — only a small part of the archaeological whole. As these new tech-heavy tools become more in-demand and necessary, the lack of access or resources required to obtain them will become more pronounced, and further widen the disparity between researchers in different parts of the world.

Beyond anthropogenic markers in the geography and vestigial vegetation patterns, we must also include human influence on fauna dynamics, including the domestication or introduction of previously domesticated species. The notable extinction of the pampas megafauna (glyptodon and urso….) during the last Pleistocene is a topic still being explored in terms of its occurrence as the result of over-hunting or not. Other notable examples of animal-human interactions in the *basin* region include the limited but notable finds of *canis lupis familiaris* (the domestic dog), often in contexts associated with human burials. As Rafael Milheira illustrates in his report on the discovery of the the earliest domestic dog find from Pontal da Barra, Brazil (1701-1526 cal BP), the verified find of the species does not give all the details regarding its purpose in the social milieu, with its usefulness as a strategic hunting partner, a potential food source, or that of a social companion all being real possibilities. (MILHEIRA et al. 2016).

With these zooarchaeological, archaeobotany and landscape archaeology in mind, we can realize that archaeology has come to extend its practices, attention and methods well beyond that of artifact. As we learn more and more just how much human's impact their ecologies and leave traces of their presence therein, it will become more realistic to perform 'archaeology' in contexts where material cultural evidence is seriously lacking or non-existent. For now, the tools required to take this approach often remain prohibitively expensive or require expertise that is

not equitably dispersed in international research communities and therefore *basin* researchers will have to continue to find ways to include these models in light of their disadvantaged position.

3.2 WHEN WERE THEY PRESENT?: TEMPORALITY AND DATING

Although both processual (process-focused) and post-processual (subject-focused) theoretical headwinds have offered welcomed alternatives to the historico-cultural 'narrative' brand of archaeological synthesis of the 19th century, the search for causation in the social sciences continues to demand *sequentiality* at a foundational explanatory factor. When this sequencing is built out with data on a two-dimensional surface it appears as the form of chronology. Just as a printed map is an abstract over-simplification of an infinitely complex geographic reality, a timeline ought to be seen as a similarly helpful, but far from complete representation of temporal reality. What the scope and detail of each chronological model will be is dependent on the goals of those assembling it — in our case, the archaeologists. There is not an *inherent* chronology that demands any obvious units of temporal division or periodizations, but it is an essential tool in making archaeological arguments intelligible: "Thus scientific dating is not just a boring necessity that tidies things up by providing numbers, it is vital for valid interpretation." (AITKEN, 1990, p. 1).

Relative dating and *absolute* dating both have their own domains of best application and also present unique explanatory and methodological shortcomings. *Relative dating* offers a comparative chronology amongst data and is more effective on a more contracted scale. *Absolute dating* attempts a chronology measured from a single temporal reference point such as *before present* (BP usually stands for 1950 when using the C-14 dating method), and is useful for *long duree* style explanations, but also has its own set of methodological handicaps. Many dating techniques are in use in *basin archaeology* in the form of extensive artifact typologies, ethnoarchaeological linguistic models and comparative stratigraphy (*relative)* and the ever-increasing reliance on carbon-14 sampling and ceramic thermoluminescence dating, as well as historical references based on 16th-17th century european chroniclers *(absolute)*.

It must be emphasized that *absolute* in absolute dating doesn't refer to the accuracy of the date, but to the fact that the dates are referenced back to a single time marker — the present (1950). The C-14 method is notoriously rife with inaccuracies that are statistically remedied by the use of standard deviations; but even so, the fact that the samples are collected in uncontrolled excavation environments where the chances of depositional and post-depositional contamination of the data is relatively high, it's best to consider the dates as interpretively adjunctive, rather than the be-all end-all. (STUCKENRATH, JR., 1965). On top of that, it is important to consider that the dates, if accurate, indicate the timing of the deposition of the associated items. In the case of repurposed artifacts — such as the bifacial lithics discussed below — the production and early use of the items may have occurred much earlier than their depositional context. Therefore the *absolute* dates that C-14 provides still require their own scrutiny and understanding.

An on-going and much publicized theme running through South and North American archaeology is the concept of the 'peopling' of the Americas and debates surrounding it. This is an attempt to piece together in an intelligible form the process(es) by which the American continents were populated — in both chronological, spatial sequences, as well as the major cultural and technological developments. It is a form of reconstructive history, and perceptible within the term itself, '*the* peopling' — which is both singular and proper in form — are the concepts of singularity, linearity, and legibility that are rarely reflective in the complexity of human processes:

> If even the most precise dates for the Paleolithic give us glimpses of that epoch only at intervals of several thousand years, clearly archaeologists can never hope to reconstruct a conventional history of Paleolithic events. On the other hand, Paleolithic archaeologists can investigate some of the broad long-term changes that shaped the way modern humans evolved — insights denied to archaeologists working with shorter periods of time, where in any case there may be too much "detail" for the broader pattern to be apparent. (RENFREW, C.; BAHN, P., 2016, p. 132).

This methodological elasticity of the temporal scale can be compared to geography yet again in the form of sweeping regional studies (horizontal) versus highly localized in-depth excavations (vertical). In the case of archaeology, the physical finds often dictate the delimitations of the temporal scope; but the initial research aims also determine what and where evidence is being pursued and, contrapuntally, overlooked or discarded.

The very oldest finds are not simply notable for the understandable awe and drama they inspire in the public imagination when confronted with an ancestral colleague so far removed from the confines of our contemporary lives, but have also been used as a form of national justification, providing an evidence-based liaison between the deep past and a contemporary national identity. (HILBERT, 2001). However, on a more functional level, 'earliest' dates are foundational for the overall dating schema of their associated region — they 'set the clock' for all subsequent evidence. Every other archaeological find that falls in sequence after this suspected earlier date, must be viewed in light of that precedent. A region's chronology, therefore, anchors its limits on those earliest finds.

Because the archaeological record diminishes in accessibility as we go backwards in time, the temporal scale expands exponentially dealing with thousands, rather than tens or hundreds of years. This can often give a likely false impression that major developments during this earlier period were happening at a much slow pace — a view that is being seriously challenged by many in the field. Due to the relative scarcity of the evidence, each new find can have a major impact on the overall explanatory model. The work being done in the *basin* that pertains to the Upper Paleolithic and early Holocene transition period is no exception to the rule.

Rafael Suarez's (Departamento de Arqueología de la Facultad de Humanidades y Ciencias de la Educación, Uruguay) on-going work and analysis of the paleoamerican occupations at the Le Tigre and Los Payos sites is robust example of how thorough absolute dating, stratigraphy and detailed typologies can be combined to construct potentially revelatory conclusions about this earliest era of confirmed human activity — conclusions that have impact not only locally, but on a continental scale.

Fishtail points have long been collected throughout the *basin* region, by both enthusiasts and archaeologists alike, and have always been associated with the earliest paleoindian cultural

groups of the area. However, because they are often surface finds, rarely have they been linked with verifiable and reliable absolute dating methods. Many of the finds in museum collections were procured long before C-14 techniques were even an option. The excavations at Pay Paso 1 provided this opportunity to attach a series of associated absolute dates with some very old lithic technology, with results linking some blades and their associated pieces as far back as 12,802 cal yr BP. (SUAREZ, R., 2015).

Again, it is not the impressiveness of the antiquity that is most epistemically pertinent but the wider explanatory implications, which Saurez denotes as clearly linked to environmentally adaptive:

> What we are seeing is interesting if we think about the environmental changes that were taking place at that time, when the end of the last Ice Age and the beginning, about 10,000 years ago, of the Holocene takes place. During the postglacial period, between 14,000 and 13,000 years ago, the territory was explored by hunter-gatherers. Then at the end of the Pleistocene the Fishtail groups appeared, between 12,800 and 12,200 years before the present. During the Pleistocene-Holocene transition, the groups that made the Tigre points emerged, which are between 12,000 to 11,300 years old. Finally at the beginning of the Holocene, the Pay Paso groups appeared. (SUAREZ apud Lagos, 2019) *[author's translation]*

It is important to note that Suarez also gives equal importance to the idea that these environmentally-specific technological adaptations are in and of themselves identifiers for the groups that developed them:

> [...] they are ethnic markers, they are technologies that mark a cultural group. If we see a metalhead, a punk or a hip-hop fan on the street, we know more or less what music they like. Something similar would happen with the tips, they are ethnic markers of identity and social cohesion. (ibid.) *[author's translation]*

While the metaphor might seem overly optimistic, given the difference in culturally contextual information we have in our own society when compared to the evidence offered by the lithics, this concept of the co-dependency between material cultural apparatus and ethnic identification, either self-ascribed or labelled from without, is important, and something explored in-depth in section three below.

Based on Suarez's (2015) and other work, the development of blade technologies in the area seem to be much more complicated than was originally assumed; this includes evident of multi-use blades with more than one function and the telltale signs that blades were not only reused for new purposes, but often refashioned or modified to better fit their secondary utility. Perhaps the most impactful conclusion of Suarez's analysis is on the implications for lithic and cultural developments on a continental scale. The discovery and classification of the pre-Fishtail, Tiger and Pay Paso lithic technologies, as well as their association with now extinct Pleistocene fauna, disrupts the traditionally-held notion that these technologies were generally following a north-to-south dispersal pattern and decreases the idea that cultural complexity was absent during these early times of human occupation.

The issue of hemispheric dominance in prehistoric technologies unfortunately carries with it more than a tinge of contemporary political implications about continental dominance and this extends to the general discussions regarding the antiquity of human occupation and the 'peopling' of the American continents mentioned above. By way of example, perhaps the single most well known object of archaeological interest in South America continues to be the skeletal remains of Luzia which have been housed in the Museu Nacional of Rio de Janeiro, Brazil. The bones, found in the Lapa Vermelha site in 1974, and dated to be nearly 12,000 years old, are considered to be one of the oldest confirmed finds of human remains in the Americas. When the museum experienced a catastrophic fire in 2018, one of the principal concerns, both nationally and internationally, was the status of the remains of Luzia which, given the scope of destruction to the museum grounds, only demonstrates how much intrinsic value is placed on the antiquity of archaeological remains — the rarity of the oldest finds increases their epistemic capital.

3.3 *HOW* WERE THEY?: CULTURE, TECHNOLOGY AND SOCIAL ORGANIZATION

The subtitle of this section is intentionally constructed to elicit a bit of head scratching on the part of the reader. By asking 'how' a past people were we can include the ways and means by which they lived, survived, moved about, redesigned their environment, played, prayed, drank and made love; but it also includes a sense of the very character of the people themselves, as in, 'How are you?' or 'How do you do?'.

This ambiguity in the playful use of the interrogative is to lead to a realization that people and the material 'technologies' they use are not separable entities. When material culture is viewed as an extension of cognition, as manufactured limbs of 'being' for projecting our agency out into the material realm, the idea that technology of people can be studied without asking fundamental questions regarding the people's very nature in and of themselves, seems very mistaken.

There is a lens of cultural prejudice that tends to push those studying other societies towards either extreme of the spectrum between viewing cultural traits, including technology, as predominantly practical or fully embedded in the metaphysical. But rather than offering a simple binary choice, accepting material culture as a physical extension of inner cultural ontologies, and vice versa, allows us to see an archaeological record as working on both levels simultaneously.

The fundamental question regarding the evolutionary genesis of tool (technology) creation and use, and therefore material culture, remains a pertinent philosophical issue. Whether technology is a manifestation of some underlying human characteristic or drive (such as Heidegger's *unrevealing*), an intentional and adaptive, essentially *problem-solving* strategy, or the outcrop of language and symbol-making tendencies of our cognition are all deep and on-going explanatory threads that merit exploration. (VERBEEK, 2000). The mounting insights of evolutionary psychology, chaos theory and cognitive anthropology are making these

fundamental discussions about the origins of human material culture even more rich and revealing.

Generally speaking, however, the archaeologist is already working within well developed, specified artifactual technologies and is more curious about the specific emergence of, means of creation and intended use of the material under analysis. That being said, the fundamental questions regarding creativity, maintained 'traditions' of technology, and environmental manipulation are at the heart of many archaeological research themes — they just tend to happen on a case-by-case or comparative, rather than at universal level of discussion.

With the relatively recent realization that species other *homo sapiens*, including chimpanzees and crows, manipulate materiality to great tool-making effect in their natural state, it's become more clear that intentional material manipulation of the environment is not a uniquely human development. When you include animal architectural creations, such as bird nests, termite mounds and enormous beaver dam-making projects, it becomes even more obvious that strategic alterations to the physical environment is in fact a common feature, rather than a surprising development throughout the animal kingdom. (VON FRISCH, 1974).

However we can, and should, separate human development and use of material culture, from that of the other animals on two basic points. Firstly, the sheer diversity of different technological manifestations, design strategies, rapid developments and plurality of strategies is not to be found outside of the human material record. This infinitely diversified array of material-based solutions to environmental (including cultural and political) conditions is the bread and butter of archaeology. The question about why or by what means a particular technological adaptation manifested in the social, cultural and environmental framework at a given time is what most concerns archaeology, including those working in the *basin region.*

Another aspect that makes human material culture uniquely *human* is related to, again, the diversity of our social and, therefore, political arrangements. Technology, and material goods in general, can often act as socially structuring (or restructuring) tools — maintaining status or causing political ruptures; defining and reinforcing subdivisions within the society; or facilitating the displacement or incorporation of neighboring social groups. At the present time, we simply

do not see this level of reliance on material cultural developments and diversity in environmental manipulation in other species that would allow us to draw convincing parallels of comparison.

3.3.1 EVIDENCE BEYOND ARTIFACTS

Before looking with greater detail into the technologically and architecturally-centered studies from *basin* archaeologists, we must also recognize those studies that indeed illuminate and investigate adaptive, subsistence and cultural practices without specifically addressing artifact development and creation. Evidence of dietary patterns, resource exploitation and settlement histories (as evidenced in the article on forest composition discussed earlier - Cruz et al.) can all be offered in the form of waste deposits, raw material procurement debris or signs of unintended modifications on the environment (such as fire), without necessarily requiring genuine tools or technology to be part of the analysis. However, these claims of non-artifactual evidence of human behavior are generally supported within the context of other finds, often artifactual in nature, that buttress the likelihood of their cultural pedigree.

In Maria Barboza's study of itchyoarcheological remains in the southwest Corrientes Province of Argentina we have such an example that illustrates how non-artifactual evidence fits into the epistemic picture. Barboza set out to get a better understanding of the importance of fish as a food source in the Goya-Malabrigo archaeological *entity* (a designation discussed below in the section on identity of cultural groups in archaeology). The methodology was robust in analysis, but confined to a single 1 x 1 meter excavation unit, reaching a depth of 145 cm below the surface. Barboza identified three distinct 'layers' of depositional and taphonomic compositions, with surprisingly the second, or middle layer, being completely devoid of clear artifacts, but exhibiting plenty of faunal remains.

The interesting thing to observe here, is that the artifacts themselves — ceramics and lithics — are not the focus of analysis, but only used as a means to support the idea that the faunal remains (both aquatic, birds and small mammals were found) are associated with human activity. By comparing the finds with sample excavations in the region where human activity is not suspected, the researcher can determine more confidently if the non-artifactual depositions are indeed the result of human activity. In the case of Barboza's study, each of the three layers

has a varying degree of clarity in this regard, with modifications to the faunal remains, including evidence of fire, figuring in the assessment:

> Although anthropic alterations are not abundant in the samples, it is considered that they are the product of human action. [...] the information obtained shows a strong association between bone accumulation and cultural material, characterized in LB1 (*the first of the three layers)* by a high frequency of pottery fragments with soot remains and carbonaceous adhesion, lumps of cooked clay, lithic material in smaller proportions (i.e. carving), the only resource recovered in LB3 together with fauna. LB2 (*the middle layer)* should be differentiated from the other sets because, although faunal diversity and the presence -despite its low frequency- of specimens with anthropic modifications (i.e. thermal variations, marks and fracture) are recorded, they are not related to another cultural item. Thus, the evidence obtained does not reject the possibility that the set could have been created by anthropic action. (BARBOZA, 2016, p. 16).

When the depositions are multi-layered, subject to the vicissitudes of post-depositional activities and contain possibly 2,000 years of occupational history in a 1 x 1 meter unit, it's not surprising the analysis of the level of anthropic influence on the remains is in and of itself a complex forensic undertaking. The legacy of the processual tradition is strong in the project's use of exacting descriptions using scientific units, but not venturing into the conversation regarding the underlying significance of the fact that fish featured in the diet of "the groups who inhabited the left bank of the alluvial plain of Middle Parana River, during the late Holocene". (ibid., 2016, p. 16).

Barboza writes that the 'novel information' her study provides will be of value to those investigating adaptation strategies in the region, offering it up as a puzzle piece in the pursuit of a clearer and more complete portrait of prehistoric living to be constructed in the future. The very essence of the turn towards seeing itself as akin to 'hard science' that archaeology underwent in the 1950s and 60s welcomed data-gathering studies without the requirement of final explanatory justifications or conclusions. After all, science is wholly descriptive, and uses its own abstract languages of signs, rather than explanatory and using an everyday language that allows for

flexibility and nuance. In that sense, all data is potentially valuable for future synthesis, as philosopher of science Gadamer explains:

> It is the very nature of scientific methodology that its statements are like a kind of treasure house of methodologically assured truths. And like every treasure house, the one of science has a stockpile for any random use. Indeed, it sees to me essential to modern science that it constantly adds to such a stockpile of knowledge available for random use. (GADAMER, 2020).

When viewing *basin archaeology* as a whole, we can see this tendency to emphasize exacting and deep data production rather than more conceptual data synthesis is very strong. Subsistence practices is one such area where the pattern remains.

Considering diet practices of the past as logically-centered adaptive practices, based purely on environmental conditions and technological know-how, it can exclude or overshadow culturally or ideationally formulated factors that may be influencing the eating habits. The ethnoarchaeological work of Gustavo Politis (Argentina) laid out the case that taboos regarding certain food sources for either particular sub-populations of a society (for example, gender or age-based segmentation) or for the society as a whole (everyone is culturally prohibited from eating) may strongly influence the expected archaeological remains based on a ‘highest caloric, lowest effort’ logic of food procurement. (POLITIS, 2019). We don’t have to look very far to see this in action when we consider which animal species our own 21st century cultures consider appropriate, rather than taboo, food sources. It’s not a scientifically, but culturally-rigorous set of patterns we have largely taken for granted as a society. It’s very likely— and Politis’ ethnoarchaeological research sets to highlight this fact— that past social groups had their own sets of culturally or ideologically-derived preferences for subsistence sources that flew in the face of calorically logical strategies:

> You have some animals which are in the environment but are not present in the archaeological record so you can assume that, like the Nukak, the taboo animals are absent because of some ideological reasons. You will never be able to understand exactly why there is a reason, but at least you know that they are

> operating in another world, in another dimension. Not in a material or in an economic dimension. They are working, they are acting for the people in another dimension — social and ideological. So the idea was to record material things and all the attached social and ideological behavior related to that thing.
> (POLITIS, 2019, see Appendix)

As Barboza's methodologically impressive study shows, the idea that archaeology is in essence the study of artifacts, or even material cultural items in general, has certainly been adjusting itself ever since the rise of the New Archaeology in the 1960s. With the inclusion of zooarchaeology, paleoethnobotany, geoarchaeology and the like, and the ever-finer precision of scientific analysis of site-procured data beyond artifacts, the long-running linkage between archaeology and material culture is not being downgraded in importance, but supported with new kinds of data. This now decades-long use of expensive and exacting laboratory-based methods for building out archaeological data sets beyond artifacts themselves is quite evidence in the work of many prominent *basin* archaeologists, such as Bonomo, Milheora and Barboza, and will likely continue to increase in scope and possibilities, even as the ideological implications and explanatory limitations of such data become more scrutinized.

Collecting information about dietary composition, food acquisition, and potential agricultural practices, when combined, also act as steps towards building out a model of the economic systems of these societies as a more macro-level. However, when one begins to introduce the analytical concepts of economic science on non-capitalist, non-market prehistoric societies it's imperative to keep in mind the terminologies and models that come along with a traditional economic analysis are heavily loaded with meanings that don't generally mean the same thing in a cross-cultural context. Ideas such as 'surplus', 'productivity', 'leisure', and even 'work' itself cannot be applied ad hoc without first explaining the ideational and cultural contexts that surround said activities, very often imbuing them with an entirely different meaning than their originally intended use. This includes many of the sweeping analytical economic models, such as marxism, that simple don't provide a useful explanatory fit:

> In relation to simple societies (classless and stateless), however, the conceptual separation between what can be considered as the set of relations of production and what is not, is more difficult and dangerous than the equivalent in complex societies. Therefore, it is impossible to analyze a simple economy using an overly rigid conceptual polarization. (SOUZA, 2002, p. 221-222).

Or, in other words, each 'economy' should be approached on its own terms.

According to cultural ecologists, the pre-colombian Guarani would be classified as broad-spectrum, low-level food production economy, meaning:

> [...] a subsistence system that incorporates a broad array of different resources requiring a broad range of inputs and tactics of exploitation. At once, this vast "middle ground" of human subsistence behavior may include both forager/traveler and collector/processor hunter-gatherers, intentional management of wild resources and landscapes, pre-domestication cultivation, incidental domestication, incipient agriculture, various kinds of horticulture, and the many processes of resource intensification. [...] However, in and of itself it is not a model for understanding or explaining how human groups operate, or how these operations evolve. (MORGAN et al, 2017, p. 20).

And, indeed, any such explanation must occur on a case by case basis with supporting evidence. In the case of the linguistically and culturally-defined Guarani groups, who arrived in the *basin* region via the Amazon basin and inhabited larger areas of the coast and subtropical forests upon the arrival of the europeans, Jose Otavio Catafesto de Souza (from the Federal University of Rio Grande do Sul, Brazil) builds a complex explanatory model using archaeological, historical, and ethnographic data.

From the start de Souza emphasizes, it is impossible to approach Gaurani economic practices without first understanding Guarani family structures, including their lineage and kinship arrangements. Since the single family unit is the universal building block of the Guarani social and production processes, it is impossible to think of economic 'relations' or exchanges

between members who do not share some level of consanguinity or family alliance through strategic couplings.

By and large, the ‘division of labor’ in Guarani society took place (and takes place) at the level of the basic family unit. Specific tasks are strictly allocated between sexes and various ages thereof. Families produce what they will consume themselves and not necessarily at a level of bare subsistence, but also eschewing pronounced over-production.

In economic anthropology concepts such as gift-giving, reciprocity and prestige goods have loomed large in models of non-capitalist distribution alliance models. There are circumstances where these kinds of inter-familial alliances occur in the form of a *tekoha*. Though it is not always entirely clear why these larger aldea-alliances are formed it appears they are when either sub-units have an surplus of food resources to exchange or to fulfill a large-scale project that requires more manpower, such as exploring a new territory. (SOUZA, 2002). Even in these instances, where a grand leader or *tuvicha* coordinates efforts, individual household heads maintain authority over their own families’ production.

Concentrating on models of *cultural ecology* to explore unique economic models in past societies can also offer many potential rationales. The emphasis on self-sustaining, small and potentially mobile single-family units does make sense in light of the subtropical forest environment and the resources it offers. Forest-based economies tend towards fragmentation and cyclical relocation when incorporating small horticultural plot clearing and this, in turn, would minimize massive population growth and the need for top-down political cohesion.

On top of the environmental restraints and conditions that lead to specific economic structures, there are also notable psychological, ideological and cosmological factors that may seriously influence the traits of each culture’s practices. In the case of the Guarani, perhaps one of the most striking of these is in their general perception of work itself. According to historical and ethnographic accounts work projects, especially those of a collective nature are seen as fun-filled social and playful activities — something that absolutely confounded the Jesuits of the early missions. (ibid). This positive association with labor was even more pronounced when it came to hunting activities, which were alike viewed as recreational and something exciting.

Beyond these general attitudes that confound the underlying sense of the economic concepts when used in industrialized, capitalist models (work as a begrudgingly undertaken obligation), there are more profound shared cosmological principles that influence economic behavior. Though certainly examples of environmentally destructive resource over-exploitation has been documented in some indigenous hunter-gatherer contexts (MORGAN et al., 2017), this is certainly not the case with the Guarani cultural groups. Their religiously sacred *modus vivendi* prohibits excessive procurement of nature's goods and there are strict cosmological laws governing their use thereof. (SOUZA, 2002). Even at the level of economies and its participants we can see potentially ontologically subjective influences in the material records. This emphasizes the idea that the externally objective and the internally subjective construct one another in human affairs: as procurement systems are developed by societies, their beliefs and ideas concerning their world have a profound impact on their degree of extraction and consumption, moving beyond models predicted on pure caloric efficiency.

3.3.2 THE ARCHAEOLOGY OF *BASIN* ARCHITECTURE

At the intersection between *landscape* (already introduced in sections above) and individual *artifacts* (discussed below) lies the domain of the archaeology of *architecture.* As touched upon in the earlier discussion regarding questions surrounding mound-building societies and their purposes, approaching archaeology at the architectural scale requires both unique methodological approaches but can offer information not accessible at the scale of the artifact.

In the *basin* region, the *mound*, along with the *sambaqui* (shellmound) and pithouse (concave subterranean dwelling) are the most predominant prehistoric architectural forms. In the case of the mounds, there are as many variants in form, construction and style to the basic concept of a 'mound construction' as there are names to describe them: *cerritos, tumulus, tesos, lomas,* amongst many others. The multiplicity of denominations speaks to the true variety of type, but is also linked to the on-going and lively discussions regarding the overall nature of the constructions and their intended use. Because the *mound* is such a general form, depending on the specific characteristics of each structure and its associated finds, conclusions regarding one

or more mounds might be erroneously extrapolated to include other mounds in the area that upon a closer look, are deserving of a very different explanation and analysis.

Mound building and *mound builders* (generic cultural denomination for 5,000 worth years of constructions) have featured heavily in North American discussions regarding the social ‘complexity’, or lack thereof, of pre-colombian societies since the inception of American archaeology debates. The basic idea is that the size and complexity of a construction project is only made possible by a large, well organized labor force, which further implies a strong, top-down political apparatus in the form of a state or central leadership. There are many holes in this overly simplistic calculus of how these structures may have come to fruition, including the fact over many generations, using just a few people at a time, either intentionally or unintentionally can piecemeal together large structures with little central planning (although this explanation doesn’t seem likely for most of the mounds).

In the *basin* region mounds we find a similarly varied and energetically discussed archaeological topic covering many distinct cultural groups and many thousands of individual sites. Some researchers have emphasized that the mounds themselves are often pre-existing, naturally occurring elevated areas that would be attractive for those seeking a raised area for any number of reasons. One of the most common adaptive strategy explanations is to use the mounds to be adjacent to, but securely above, the floodplains and abundant water resources, including faunal, floral and ease of mobility on canoes, that situation would provide. Another explanation, by no means mutually exclusive to the ‘watershed resource’ one, is that the mounds provide strategic ‘line of sight’ for defense, communication, control of movement, or weather tracking purposes. (MILHEIRA, 2019).

Some of these adaptive heavy, practical explanations are at times seemingly complicated by many of the artifactual finds recorded within or amongst the platforms; elaborate human burials, fine ceramics featuring anthropomorphic figures and valuable artifact caches, all apparently point to a significance of the mounds beyond a simple platform designed to gain a little elevation. (BONOMO; POLITIS, 2018). Of course, the reality is that neither of these uses, practical or ritualistic, survivalist or ideational, prohibits the other. When we come to accept cultural ideas as adaptive strategies and problem-solving technologies as informed by ideological

concerns, we can celebrate the elegance of material culture working at both levels simultaneously.

In terms of architecture models, we can use an analogy more close to home in the example of the local neighborhood church. Yes, it’s structure and many of the symbolic elements would be rightly classified as religious, but if we took a more complete tally of its adaptive practices we might discover it functioning as a weekend social point for coffee and gossip, a foodbank to feed to the needy, an after school daycare for busy parents, a political polling station during local and federal elections or a temporary emergency shelter for victims of natural disaster. In this sense it is hard to say if the building itself is more ritualistic (ideologically situated) or functionalistic (adaptive to social survival strategies). It’s important to allow archaeological remains the same possibility of multiple layers of purpose working in tandem, rather than assuming the simplest explanation is always the most likely. Although referring specifically to North American mound building societies, Susan Alt’s words could be equally applied to the study of the *cerritos* of the *basin* region:

> The drive for simplicity of explanation is particularly strong in the case of the mound builders of eastern North America, whose earth-moving practices are tangled up in ancient and modern-day ideologies. In a teleological and circular set of arguments, North American societies have been labeled as not very complex, so their monuments cannot be complicated constructions (thus mound building is described as a simple affair): in reverse, the assertion that mound building need not have been very demanding or highly organized is used to warrant arguments that Native American societies never became very complex. (ALT, 2011, p. 195).

The fact is is that the constructions themselves, largely due to their sheer volume, extensive chronology and contextual variety, have been used as pawns in an ideological discussion about the very nature of pre-colombian social ‘complexity’ and the framing of the analysis in this way appears to restrict more case-by-case, nuanced and multifaceted explanations situated in the details of each find. There is the echoing legacy of the dazzling appeal of ancient egyptian pyramid builders when archaeology confronts architectural of any kind and the

explanations that lean into the metaphysical or cosmically symbolic are then quickly counteracted by those who claim the finds as nothing more than accumulated human waste build-up unthinkingly overtime and other who allow for a likely hybrid of pre-existing conditions that are then built upon.

This use of evolutionary-based modeling of simplicity to complexity in *homo sapien* societies is misleading. Generally it needs to be married to a clearly defined parameter of complexity to make any sense: technological complexity, bureaucratic complexity, artistic complexity, sexual complexity, theological complexity are quite different *types* of complexity or indicators of development in a certain lane of human endeavor, and some of them lend themselves much more readily to providing a robust archaeological (i.e. material) record than others. The likelihood that any given people would define their own level of complexity and achievement based on the chance materiality they would leave for future generations to find is certainly possible (the ancient egyptian pharaohs, aztec stele, Roman imperial monuments), but not necessarily a given.

Moving beyond the specific questions surrounding the aforementioned mound builders and their *cerrito* complexes, we can explore the functional, social and cosmological issues raised in the archaeology of architecture by comparing both the design details and settlement arrangements of three other architectural entities that appear in *basin archaeology* — in this case we will include the region's prolific *pit-house* or subterranean constructions; the coastal *sambaquis* or shellmounds; and, in major a pivot towards historical archaeology, the remains of a 17th century Jesuit *estância* or working ranch/plantation. One theme that continues to present itself in all of these analyzes is the interminably dialectical relationship between function and form — the desire for separation between explanations based on ‘strategic’ adaptive practices, as opposed to belief-based cultural behaviors becomes more and more untenable as the co-dependent fusion of the two explanatory models regularly appears time and time again, and in the archaeology of architecture is no exception to the rule.

Much like the mounds, pit-houses (or semi-subterranean architecture) of the southern cone of Latin America are impressive in both their temporal, geographic and diverse range of size and style. They were only first seriously excavated in 1964-65 under the leadership of Pedro

Ignacio Schmitz working out of the Anchieta Institute in São Leopoldo, and later, with support from the PRONAPA project. (SCHMITZ, 1967). Their recorded use ranges from 5500 a.C. until modern times in the *basin region* and in sizes that range from small excavations, which according to archaeologist Jairo Rogge (2004 apud COPÉ, 2006) likely functioned as storage units to sizes that seem to indicate a social-use well beyond that of a single-family residence. As Silvia Copé lays out in her multi-layered overview of pit structures in their universality, one of the long-running functional explanations for their placement within the earth is linked to temperature regulation, as they are often found in areas with lower, rather than tropical, temperatures on a global scale. A pioneer in the study of these structures, Brazilian archaeologist Padre Ignácio Schmitz, from the UNINOS University in the town of Sao Leopoldo, has also taken this climate-control explanation as a major factor in the development of this specific architectural building strategy. However, the diversity of their construction and settlement patterns is more varied than uniform:

> In Brazil, the layout of the structures does not have a fixed pattern. They have been found aligned in rows, forming parallel lines or a circular concentration of small structures around a larger one. Although they also occur as isolated units, they usually appear in groups sets containing from 2 to 68 units, most often arranged irregularly. (COPÉ, 2006, p. 8).

In the specific case study of Cope's excavation and analysis of site RS-AN-03, located in the municipality of Bom Jesus in southern Brazil, we have an excellent example where the functionalist and socio-culturalist uses of architectural space must both be addressed in unison. Excavating an arrangement of four distinct semi-subterranean circular structures, it is probable that three of the four structures, which are smaller in size (6 - 8 meters in diameter), offer up evidence of a sedentary domestic usage. Based on artifactual, archaeobotanical, wear-use, and design details (such as a central cooking hearth), the structures convey the telltale signs of a single-family dwelling.

All four of the structures offer the functionality of protection from cold fronts, are situated to avoid the likely paths of flash flood inundations, and may even be positioned in a way

to best protect against outside adversarial social groups (ibid). However, the fourth structure, Casa A, is nearly three times the size of the others (18 meters in diameter) and also contains multiple hearths, or fireplaces. This deviation from the other structures demands the introduction of new interpretive inquiries — Was this the site of religious or cosmological social ceremonies? Does it speak to the existence of a polygamous family structure that may have political implications, such a chief or *cacique*'s abode? Or was it perhaps a workshop of some kind that required more space and multiple hearths for its functionality? While Cope doesn't necessarily draw conclusions regarding the final use of the space, the primary point it to illustrate that once the primary materials of construction are recorded, the dimensions are mapped, the dates are ascertained and the appropriate comparison to other previously recorded sites is reviewed, the multilayered information of architectural archaeology brings forth new layers of required interpretation.

Likewise, turning the focus towards the *sambaqui* or shellmound constructions that proliferate along the coastal zones of the Southern cone (a large majority dated between 4,500-2,000 A.P.), we also find the discussions firmly entrenched in questions regarding to what degree functionalist and socio-cultural factors best explain their form and function — and, again, we find that any description that overlooks either of the influences seems inadequate. Similar to the debates regarding the *cerritos* mounds, debates over the years have played out in regards to the extent of *intentionality* in the shell mounds' composition — Were they entirely anthropic in origin and, if so, could they be the simple accumulation of food refuse over many years? Or were they naturally occurring deposits of zoolomophic material repurposed by humans for ceremonial use? Rafael Milheira (2001) classifies the three explanatory models as the naturalist, artificialist and mixed explanatory models.

The search for a singular and tidy explanation to a widely varied archaeo-architectural display of evidence would appear amiss:

> Even among the *sambaquis* located in the Brazilian territory a great cultural diversity is visible, developed in a heterogeneous and plural way. Cultural structures, as well as cultural symbols and codes are not standardized, and it is not possible to conceive of a *sambaqui culture*. We have to understand the

> shell-mound sites as dynamic constructions conceived by human actions inserted in time and space. (MILHEIRA, p. 96, 2001).

Comparison between sites of a kind is essential in archaeology, but also the details of each individual site, in its context, offers the opportunity and need for a new approach. With the shell-mounds we certainly see the likely large scale use of food remains as construction material, in an environmental context that seems linked to the practical day-to-day existence of societies who live alongside and depend upon the marine resources. On the other hand, there are the abundance of intriguing zoomorphic stone figurines, some designed for the use of narcotics and also the consistent inclusion of human burials, sometimes alongside elaborate artifacts, that seem to counteract our traditional ideas of what one would expect of a 'refuse heap'. Again, there appears to be the need to approach the desire of gaining epistemic access to this past cultural context with an openness of mind that doesn't fall into the prescripted notions of what counts as functional versus ideological.

Though an initial reaction to this inextricable combination of functionality and apparent cosmological uses of architectural space might be to emphasize the innate lack of cultural understanding between cultural and historical contexts so far removed from, and alien to, one another — an ontological gap that at times may seem impenetrably wide — we can turn to more 'familiar' or historically contemporary case studies to realize the same admixture of ideational and functional dialectics at work in all architectural archaeology, and material culture in general. This realization can help render the 'exotic' more familiar, and the familiar jarringly fresh.

As a way to marginally include the wealth of historical archaeology research that thrives in the Rio de la Plata region — spanning some 500 years of european, african and amerindian interactions — the UNINOS study of the Yapeyu Jesuit plantation complex/reduction, undertaking between 2006-2020, is a fantastic example of the rich and highly developed discipline of historical (colonial) archaeology that should not be overlooked or underappreciated. The reduction, one of dozens established by the Jesuits at the beginning of the 17th century, sits on the right banks of Uruguay river and, in many respects, exemplary of the exploitative, complex 'plantation-like' relationship between the natives of the area (in this case the Guarani

Charrua and Minuanos people) and the Jesuit clergy. (ROGGE et al., 2020). View as a microcosm of the european colonial agenda writ-large, the dual functions of the reduction — labor-intensive, production-oriented agro-ranching powerhouse and religiously-affiliated, christian cosmological satellite monastery — the murky membrane between colonial utilitarian exploitation and ideologically-endowed religious questing become inseparable. Taking a seemingly straightforward description of a set of building remains from the UNISINOS report, we can see the checkerboard-like pattern that functionalist and cosmological explanations almost seamlessly produce:

> Of the house's compartments, the smallest was 64 m2 in size and opened on a large door in towards the corrals. It would house the carts, harnesses, tools, leather and also the residents' supplies, as well as serving as an eventual inn for travelers on the way. Across a narrow opening connected with the larger space (86 m2) would be the dwelling of the administrators and their families and could also serve for occasional religious services, especially before the construction of the *Passo do Aferidor* chapel to serve the indigenous people of the left bank of the river. (ROGGE et al, 2020, p. 23). *[author's translation]*

3.3.3 THE CREATION OF ARTIFACTS IN THE ENVIRONMENT

By adjusting our scale of size from architecture to the artifact, we arrive at what has more generally (and perhaps conservatively) been considered the bread and butter of archaeological data collection. This is likely due to the 'collectibility' of artifacts from a time when antiquarianism and archaeology were more or less pursuing the same aims. Since the discipline has matured beyond the goal of procuring material cultural curiosities and treasures to be put on display in private collections and museums, archaeological pursuits were often linked to items that could be removed from their contexts and transported. Now that the intended goals of archaeology have expanded so far beyond their originally purely exploitative aims, and now any and all physical data that will provide a better understanding of the past, the artifact has since become one contextual element amongst many.

Very much like the layers of interpretation needed to approach architecture of the past, artifacts also provide a complex nexus where technological ingenuity (adaptation), and cultural meaning (ideology), are combined in objects derived from a fixed material setting (environmental conditions). It is the later of the three that will be explored first via a case study from northwest Uruguay.

Technological practices and the ‘raw’ environment often meet in archaeology fieldwork at the sites of suspected material procurement, and lithics is the predominant case in point. Again, the actual presence of finished technologies is not required, as the exploitation of the environmentally-derived material (this includes *all* materials) often leaves behind traces, supposedly unintentional, that can provide valuable clues about the nature, scope and development of the particular technology under scrutiny.

Stone, because of its high durability, tends to feature most predominantly in the archaeological record and the *basin region* is no exception (as illustrated on the section about the Uruguayan fishtail points above). Stone tends to remain intact as other evidence dissipates so it often becomes the main indicator and evidential record of early human occupation or presence in an area. At the same time this very durability was likely the quality that fostered stone’s universal use in a wide variety of contexts and purposes throughout the scope of human history and allows for its abundance in the archaeological record; not only in the form of finished artifacts, but also in the evidence of its procurement and workshop stages:

> In general, the character of the archaeological record can involve large amounts of waste at extraction sites and so the reductive nature of the material and its durability, leads to a great sympathy with the *chaine operatoire* approach, which was in fact developed as part of a repertoire of lithic analysis. Their durability also means the most stones survive most post-depositional processes. (HURCOMBE, 2007, p. 165).

Besides the information manifest in the design and intended use of lithics and what it can indicate about the lifestyles of its users, the raw material itself can offer far-reaching epistemological data points. Much like what carbon-14 dating offered in terms of temporal

exactitude, thin-section microscopic petrography can offer accurate mineral identification from artifacts that can then be associated with regional quarries. An application of this strategy was applied to over 1,000 years of lithic materials from the *Rincon de los Indios* site on the East coast of Uruguay. By analyzing the mineral composition of artifacts associated with each dated stratigraphic unit, ranging between 7,100 - 8,809 B.P., and then matching those minerals with regional quarry sites, Jose Lopez Mazz, Oscar Marozza and Diego Aguirrezzabal (2015) were able to sketch out the dynamics of changing material procurement practices over the centuries.

Including the startling fact that in some periods the source material for certain tools was being collected from over 100 km away from the depositional site, the study raises many important questions about factors that may have influenced choices regarding material selection; changing environmental conditions, advances in technology that demand more selective quarrying practices, exchange networks or even competition from rival groups, may all have acted individually or in tandem to create such drastic changes in raw material exploitation. Though these possibilities are all on the table, the main takeaway from studies like this one out of the Universidad de la Republica, Montevideo, is how much information can be derived from artifacts beyond simply asking questions about their utilitarian or cognitive values — the raw components offer a wider story and requires alternative methodologies. (MAZZ; MAROZZI; AGUIRREZABAL, 2015).

3.3.4 ARTIFACTS AS OBJECTS

When looking at individual artifacts, rather than their chain of production or raw source material, a question of purpose is often the first to be posited. This framing presupposes an epistemic position that an objectively correct answer to the question is at least possible enough to justify its asking. It embraces an ontologically objective reality in regards to the researcher being able to posit a likely intended *use* of an object, but does not make a judgement regarding the ontologically subjective *value* of the object. We can discuss later how the two bodies of knowledge (objective and subjective) can play off of and inform one another, but for now, the two realms of epistemology are intentionally held at arm’s length to sharpen their contrast.

To begin an investigation into the original purpose, significance, or *intentionality* of the artifact and its user, we could substitute the historian Pocock's "mobilization of other evidence" for the archaeologist's rightful concern with context and we would be situated comfortably in a parallel discussion of interpretation of meaning between the two disciplines.

The "founder" of the New American, or processual, approach to archaeology, Lewis Binford, explains the differing use of sources between "traditional" history and archaeology by using the concept of *dynamics* (human activities of the past; history) that leave behind *statics* (the physical evidence left behind by those very same activities; archaeology):

> They (the archaeological remains) are not direct observations that remain from the past (as in the case, say, of a historian who uses information from a 15th-century diary which conveys observations actually made by the author in the 15th century). Since observed facts about the archaeological record are contemporary, they do not in themselves inform us about the past at all. The archaeological record is not made up of symbols, words or concepts, but of material things and arrangements of matter. The only way in which we can understand their meaning - if you will, the way in which we can state the archaeological record in words - is by knowing something about how these material things came into being, about how they have been modified, and how they acquired the characteristics we see today. That understanding is dependent upon a large body of knowledge which links human activities (i.e. *dynamics*) to the consequence of those activities that may be apparent in material things (i.e. *statics*). (BINFORD, 1983, p. 19).

Binford's claims about the directness of historical observations in text-based resources would probably frustrate a lot of hard-working historians and, certainly, his stance regarding the lack of symbolism within the archaeological record has since created a huge backlash in counter-thinking amongst archaeologist thinkers, but the division he makes between the fundamental differences in handling textual versus physical remains.

To offer an illustration by way of example: the standard 9 ½ inch, 5 ounce, hide-bound American MLB baseball is optimally designed for its particular requirements of performance; but when viewed as an object by most north american people, the reaction would be of much

more emotional or symbolic content (nostalgia, excitement, pride, or even boredom) than a thoughtful reflection on its particular technical qualities and usefulness. To put it another way, I could explain that I *use* my Ferrari for my daily commute to the office, but that would be a very incomplete, if not downright misleading, explanation of why I might possess that particular car and what it might *signify* to me, and the larger society, as an object.

One approach to offer a language of explanation for the more descriptive *mapping of categories* was evolutionary archaeology. In the late 19th and early 20th centuries, no field of academic inquiry was immune to the allure of explanatory satisfaction and logical elegance provided by Darwin's model, and archaeology was certainly no exception. The fact that biological systems differ in character and operation less obviously than cultural developments was sometimes lost in this sweeping embrace of the theory:

> Some Americanist archaeologists of the 1920s and 1930s picked up on the notion of evolution, but they made a fundamental mistake—one that undermined any chance of using scientific evolutionism as a means of explaining the record. In short, they transferred a biological theory into archaeology, but they failed to make clear, probably because of a lack of clarity in their own minds, exactly what was evolving. Their colleagues were not persuaded— one went so far in the 1940s as to imply that artifacts do not breed—and scientific, or Darwinian, evolutionism as a legitimate explanatory framework in archaeology became dormant until the 1970s. (O'BRIEN, LYMAN, 2000, v-vi).

In this framework, evolutionary biological language would likely be used to explain the appearance of an object: Perhaps its original adoption was the result of a long series of *trial and error* of technological *mutations*, spanning generations of craftsmen. The definitive version of this new *species* of weapon would be firmly established once its *advantage* for use was recognized by a group. Then, *naturally*, the technology would *expand its territory* of use, as it replaced other, less *effective* older models and would lead to their *extinction* or abandonment of use.

Norman Yoffee explains the somewhat ham-fisted use of the evolutionary model in archaeology interpretation as an example of misappropriation of theoretical models in general:

> This discussion in social evolutionary theory can serve as a case study. I submit, for a larger range of issues concerning the building of archaeological theory… Most archaeological theory comes from outside archaeology itself, and the neoevolutionary model is a prime example of such borrowing. (YOFFEE, 1993, p. 60).

Yoffee goes on to explain, specifically, why the "evolutionary step ladder" model of early state organization (*bands-tribes-chiefdoms-states*) does not correlate with the details offered by the archaeological record. This could certainly be used, again, as a specific cautionary case study against an uncritical appropriation of language between disciplines.

The evolutionary model, when applied to the interpretation of artifacts, was often visually manifest in the profusion of typology as the de facto model for making sense out of the archaeological record from the 19th and well into the 20th century:

> [...]the typological classification is easily seen. It is akin to the Linnaean classification of biological species only in its form but stands far apart in the principles utilized in the division of its phenomena, Still, it should be borne in mind that the typological classification is based on classification of species, and in order to escape certain mistakes on the typological classification it will be well to refer to the biological classification as one rich in experience and observation. At present it is interesting to note that both systems of classification suffer from similar defects: in biological classification of species the most difficult is determination of the species; almost the same difficulty is met in the determination of a type. (GORODZOV, 1933, p. 99).

The compulsion to categorize and name pottery types, weapons, rock art, and architectural features into distinctly labelled "periodizations" of development and then arrange the item types (usually using archetypal examples of each variation) along a horizontally-oriented chronology of gradual change over time was the de rigueur strategy. Again, these meticulously organized typological models were not designed to offer an explanation. They

were viewed and utilized as a diagnostic shorthand for future archaeological work, collections and curation; not as a means of explanation.

What these typological models *did* profoundly illustrate was another, secondary layer of Darwinian explanation in evidence: the slow adaptive propensity of humankind to change their behavior in accordance with changes in their environment. Though it wasn't always so definitively stated, a typology or *series* of artifacts was meant to imply the circumstantial behavioral adaptations being mirrored in the changing details of the items themselves. A pottery style that undergoes a sudden or even gradual transformation within a society would parallel some kind of environmental stress or opportunity being played out in the cultural form of the design details in a house-hold container for foodstuffs.

Here we have Darwin's language working on two levels: his evolutionary model provided the grist for both the artifact *typological* illustrative pattern and also the underlying adaptive-cultural-survivalist framework of explanation. The role of the individual is expressly absent. At the satellite-high resolution of this myopic, processes-based explanatory vista, the choices, ideas, or behaviors of single individuals are out of focus. This is human activity as a natural phenomena, much like volcanic disruptions, the migratory routes of bird colonies, or the interplay of ocean currents. It prohibits the species-proclaimed specialness of *humanity* of humankind from playing a role in a more ontologically objective explanation.

As a hefty counterbalance to this evolutionary, diffusionist language of the inevitability of the existing archaeological record as a naturalistic manifestation of mapeable adaptive practices, a wave of theoretical concepts to re-introduce individual agency, choice, and creativity emerged in archaeology (as in many other fields) and also began to be fully critical of the *individualization* of the interpreters themselves:

> If the hypothetical deductive scientists of the 'new' archaeological paradigm saw themselves as the ultimate social planners, discovering laws of cultural evolution that would lead us knowingly into the 21st century, we post-processualists have more modest aims. We can predict neither the past, nor the future; in fact, we claim not to know that past at all. Rather, we tell stories about it and discover stories told by previous generations of scholars...But — and this is the important point — we proceed *critically*, seeing how these stories

> are used and manipulated for present purposes, sometimes condemning the tale, sometimes approving it — always, of course, from a *critical* perspective. (KOHL, 1993, p. 13).

We are always wearing a minimum prescription of two pairs of interpretive lenses. Andrew Jones (2004) simply refers to these as the contrasting physical and textual models of the archaeological record. Another strategy, design theory, offers the satisfying "rationality" of processual models, while also allowing for the input and idiosyncrasies of an individual acting behind the object in question; it uses the logic of creative design to explain an item's characteristics:

> As restructured (*as opposed to its use in architecture, engineering and industry)* for ground stone analysis, design theory assumes that tools are made to solve problems deriving from functional, economic, or other realms. The designed differences in form are sometimes brought about by sociocultural constraints such as economy of production, durability, and efficiency. Cost of production issues, such as distance to material source and difficulty of manufacture, often dictate choices of design specifications. (ADAMS, 2002, p. 8).

Here we have the idea of thoughtful *invention* and the rationality of the engineering of objects being used to explain what objects are found. It also offers the wiggle-room of sociocultural constraints to allow for any characteristics that don't fit the expected results of a fully rational design strategy. Delegating any possible expression of symbolism, creative expression, political meaning, or even personal whims to the footnote of "sociocultural restraints" seems like a pretty unsatisfactory solution to the complexity of human materiality.

Instances in which an almost entirely unique artifact type appears in the archaeological record are great examples of where ideas regarding invention and adaptation are put to the test most clearly. These instances limit the comparative analysis offered to more familiar objects. The engraved stones retrieved from the banks of the Rio Uruguay — on both Uruguayan and Argentinian sides of the river — are a case in point. Though bearing some similarities to the carved plaques retrieved from southern Brazil and the Argentine pampas, these stones, associated

with the La Paloma designated cultural group, are dissimilar enough to make a useful comparison unlikely. (PEREZ; GAZZAN, 2015).

In general, artifacts that fall outside the explanatory models of readymade utility tend to be clumped into the ‘ceremonial’ or ‘ritualistic’ class of objects. This holds true not only for the early interpretations of these carved stones from the Rio Uruguay, but also for the *thunderstones* or *banderstones* of both American and European derivation, which are now being reevaluated as objects that likely held dualistic — cosmological and utilitarian — functions. This is to say that objects, including tools, can hold both utilitarian and ideational significance to their users. In fact, very obviously, they bear such complementary, overlapping importance. However, the tendency to describe artifacts which defy an obvious tool-like utility as being purely symbolic or religious in character, is an out-dated, simplistic, and lacking creativity. It leads to dead ends in the analysis that are now being revisited, reopened and infused with multi-layered interpretation to better under the once ‘mysterious’ objects.

Because one-of-a-kind artifact types do not offer the evidential benefit of parallel and analogous finds from other sites, alternative methods of analysis and interpretation must be employed. In the case of the carved stones of Rio Uruguay, the strategy was to include and explore every step of the *chaine operatoire* in the making of the stones to see if a more cohesive interpretation could be reached, rather than simply continuing to define the stones abstractly as ‘ceremonial’ objects. (ibid).

Perez and Gazzan approach the enigmatic engraved stones not by returning to the original excavation sites themselves, but by reorganizing and reimagining the data that was collected in the 1970s excavations. The sites themselves have suffered (?) from the construction of the Salto Grande Dam, constructed between ‘74-’79, which was the main impetus for the original excavations. Multiple national and international institutional bodies including the Centro de Estudios Arqueológicos de Montevideo (CEA), the Museo de Historia Nacional (backed by the Minister of Education and Culture), and UNESCO were involved in the financial and strategic support of the original salvage project, which speak to the site’s perceived importance and administrative complexity at the time.

Perez and Gazzan relied solely on the documentation and material from the earlier excavations including 77 of the iconic engraved stones. More importantly the previously overlooked collected material was analysed to reconstruct, as accurately as possible, the context in which the engraved stones were found. The strategy, developed by Cabrera Perez, was designed to explore the pieces at four distinct stages of their post-depositional development: 1) Primary material and procurement; 2) Formation and production; 3) The finished result; 4) Use of and circumstances of which they were abandoned within the context. (ibid., p.272). The pair were able, using the outstanding stratigraphic information, as well as the artifacts themselves, were able to determine there was strong evidence of a lithic workshop and occupation at the site. However when considering the details (dimensions, primary material and signs of wear) of the cores, debitage, and carving and percussive instruments on site, they determined this material *was not* associated with the manufacture of these unique carved stones!

Investigating more closely at the stones themselves, they discovered surface evidence that stones had in fact been heavily polished in a manner consistent with being tumbled in strong currents of water, likely transported downstream via the Rio Uruguay. This new analysis offers an intriguing twist in the derivation and context regarding the carved stones. Perez and Gazzan offer the possibilities that the stones may have been out of their original cultural context even at the time of their deposition at Salto Grande. Though they acknowledge the possibility that the stones may have indeed been *ideofacts*, whose primary function is symbolic, they also include the high probability of use in a “technological subsystem”. This offers two interesting, more nuanced, and complicated possibilities; that the stones were originally symbolic in their function but then reused as utilitarian tools in a new cultural context that didn’t recognize them as such; or they held a technological and ideological function. Though the 1970s data was incomplete — in that it was not collected with this multi-contextual analysis in mind — nonetheless, this is an exciting example of what can be achieved using extant data in a multilayered analysis.

3.4 *WHO* WERE THEY?: IDENTITY IN ARCHAEOLOGY

Like all forms of knowledge building, archaeology relies on a level of classification or naming of its research units to allow the peer-to-peer discussion of the source material to take place in a somewhat manageable way. However, when attempting a ‘logical’, easy-to-use taxonomy of humanity’s infinitely diverse cultural, technological and behavioral manifestations, it becomes immediately clear that any such lines of division are anything but inherent. The ways in which we categorize humans into groups is in many respects based much more heavily on historically and ideologically situated practices on the part of the designators than any clear cut markers that would render such groupings obvious. (JONES, 1997). It becomes even less clear in archaeological classificatory practices when those being named or designated as a group are not generally not around to set the record straight.

The apparent need to ‘catalog’ cultural and ethnic groups for the ease of communication amongst researchers versus the self-identification as a socio-cultural ‘unit’ by a peoples is a very important distinction. That distinction often gets muddled in archaeological and ethnological literature when designations are applied to groupings that have precedent in the discipline but require further scrutiny. It serves everyone well that a separation of the two means (emic or etic) and purpose (research or self-identification) of categorization are distinguished and made plain when using such ethnic, cultural, racial or tribal monikers in the research. The misuse or unclear cultural identifiers is misleading representation of the truth and flies in the face of archaeology’s aims at thoroughness.

The scientifically and historically-inculcated drive to sequence research items along a typology (perhaps going all the way back to Aristotle's proto-scientific texts) was quite uniformly and casually applied to cultures and societies amongst the early waves of South American archaeologists and anthropologists. The first major North American work on South American archaeology was literally called ‘The *Handbook* of South American Indians’ (compiled by Julian Steward in the 1940s). And while handbooks are certainly useful for birdwatchers, stargazers or rockhounds, using such a model for the subtlety and fluidity of human cultures doesn’t pass scrutiny. Humans have the capacity to identify themselves and what groups they claim to belong or not. The likelihood that the cultural denominations and group divisions put into use by the researcher would correspond with or be based upon the

auto-denominated identification of the people in question is unlikely. Furthermore, once these organizational models are accepted and continuously recycled within the academic literature they steadily take on a veneer of hardening factuality, creating ossified categories, perhaps grossly misleading, that become hard to think beyond. In his review of what he sees as refreshing approaches that critique the restrictions of the PRONOPA-inspired classificatory orientation Klaus Hilbert references a paper by Silva that gets at the heart of the matter:

> Silva highlights the incapacity of the old systems of classification to contribute, 'to one of the principle aims of archaeology [...] to explain, through the archaeology record, the behavior and the trajectory of human populations of the past', or, in a similar form citing Shaan (2007, p. 78), the 'necessity to produce a history of the past that is dynamic and tells the story of dynamic sociocultural changes'. (HILBERT, 2007, p. 119).

In other words, each time the cultural denominations, phases, artifact 'types', formalized 'traditions', and closed periodizations of archaeological pasts become emphasized by their re-use; they further de-emphasize and obscure the dynamic, open and complex fluidity of identification practices, transitions, slow-growth innovations and plural ambiguity that sits at the margins of every human interaction. This tension between the desire to classify for sake of making research and academic discussion possible and the infinitely more nuanced reality of each social situation is a philosophical problem that persists throughout the social sciences.

When viewed as an abstract epistemological tool with political implications, the classifications one uses is often an outgrowth of the characteristics one wants to emphasize or the divisions one wants to exacerbate. If race is your paradigm, you will discover and develop races amongst people; if material developments is your focus, then technology typologies may define cultural groups; and if you come from a European-oriented ontological model you will almost certainly draw lines between settlement practices (hunter gathers vs. city dwellers) and use continental divisions (indigenous vs. colonial) as foundational divides in historical developments. These are only *obvious* divisions to the particularity of the european meta-narrative.

Even the seeming ambiguity of the concept of 'culture' itself is a categorizational model that stems from a very specific and historically entrenched genesis. It is not a *given*:

> [...]although the emergence of the concept of culture reflects a shift away from racial classifications of human diversity, the concept carried over many assumptions which were central to nineteenth-century classifications of human groups. In particular, there remains an overriding concern with holism, homogeneity, order and boundedness, which has been attributed to the development of ideas concerning human diversity in the context of nineteenth- and twentieth-century nationalist thought (Handler 1988:7-8; Spencer 1990:283, 288-90; Wolf 1982:387). The perpetuation of these concerns in twentieth-century conceptions of culture and society resulted in a general representation of the world as divided up into discrete, homogenous, integrated cultures (and societies), which were implicitly equated with distinct peoples or 'tribes' (Clifford 1988:232-3; Rosaldo 1993 [1989]:31-2; Wolf 1982:6-70. Group identity, or 'peoplehood', was assumed to be a passive reflection of cultural similarities. (JONES, 1997, p. 48).

More specifically, we can see that as the aims of archaeology evolve, so too do the categorizational models. As an emphasis on ethnology gave way to a focus on social development, classification of particular races shifted towards developmental groupings. More recently ethnicity has emerged as a more flexible, but still deeply politically embedded, taxonomic catch-all; but we can reliably expect that this concept too will soon be in need of revision.

As an epistemological conundrum with foundational methodological implications, considerations regarding ethnic or cultural taxonomy sit squarely at the center of the on-going dialectics of archaeological studies. Taking the position that the complexity of human behavior, both for individuals and collectively, defies clear classification, it can be anticipated that the language we use to explain and understand ourselves and others will and should continue to evolve to encompass that increasing level of sophistication and exactitude.

Being that *basin archaeology* is indebted, for better or worse, to the influence of the culture-historical traditions from Germany (*Kulturhistorische)*, and the emphasis on

technology-centered typological models from the French and the North American-derived anthropological models, including the scheme of Traditions and Phases developed by the PRONAPA era projects in Brazil; it comes as no surprise that we can find the literature imbued with the telltale use of these categorizational models. The use of research-based labels for ethnic and cultural groups is not without its fair share of internal criticism and occasional debate:

> Today, in the Brazilian archeology community, the phases and traditions defined during the PRONAPA era are mixed with ethnoarchaeology-based ethnic identities, creating neologisms such as "The Tupiguaraní", "The Humaitá "or 'The Umbu". This way of personalizing a chronological category may simplify communication between archaeologists and specialists, but it reflects an ignorance or a lack of concern with basic concepts in relation to the proper classification scheme for archaeological cultures. (HILBERT, 2001, p.112).

Merecedes Okumura and João Carlos Moreno de Sousa (2017) have also discussed the confusion caused by attempts to strictly link artifactual assemblages with a newly designated cultural group. In the case of Umbu tradition, they discuss how at times more than a dozen different names were given to various sub-assemblages over the years, and attempts to assign a new find to any one of them is a nearly impossible task. As new material evidence disrupts the researchers cultural typologies a juggling of the accepted ‘traditions’ takes place trying to fit the finds into sensible, manageable categories. Some cultural designations become irrelevant and fall out of use by most of the research community, but may persist amongst others, causing even more discord in the subsequent research literature.

While maintaining a healthy degree of skepticism towards tautological cultural appellations, archaeologists are generally in the business of casually creating ethnic-cultural denominations in a haphazard way — it would entirely defeat the purpose of their organizational application. As Politis and Bonomo (2012) lay out with clarity in their defense and definition of the Goya-Malabrigo ‘archaeological entity’, oftentimes the cultural groupings used amongst researchers are defined by multiple, and stringent, archaeologically-verified identifiers.

In the case of the Goya-Malabrigo group, the recognized cultural markers include: the location of their occupation along the fluvial plains of the Middle Parana and Lower Uruguay rivers; their dietary composition of local fauna; a technological assemblage associate with fishing and hunting practices; a specific ceramic tradition including some signature items like zoomorphic 'bells'; identifiable mortuary practices; a ranked society socio-political organization; settlement arrangements; and small-scale horticulture with telltale vegetable varieties. (ibid). While other recognized, regionally neighboring cultural groups may also exhibit one or even a few of these same characteristics, it is their combination and their consistency over a temporal span (2000 yr. AP - 300 yr. AP) within a confined geographic region that gives researchers the confidence to employ a single moniker to represent this intricately layered cultural entity in a way that allows for more manageable, discussion, comparison and analysis. While the naming itself of such an association of traits — in this case, Goya Malbrigo is simply a combination of two early excavation site names — is genuinely an arbitrary signifier, this only emphasizes the fact that it is pure epistemically objective 'content' that justifies the categorization in the first place:

> Beyond a certain essentialism inherent in the creation of archaeological categories, Goya-Malabrigo has demonstrated its usefulness as a unit of analysis, both by the consistency and recurrence of the features that characterize it and by presenting complex and distinctive stylistic elements and a definitive adaptive. Additionally, this entity provides an adequate framework to systematize and compare the available archaeological information and makes it possible to reconcile data and interpretations generated from different theoretical frameworks. (POLITIS; BONOMO, 2012, p. 23). *[author's translation]*

Fabíola Andréa Silva and Francisco Silva Noelli (2017) have combined elements of linguistic identity, ethnicity and design style of material culture (in their case, ceramics) to argue that each of these characteristics can be used to support the construction of the others. They claim that language is a key component in instruction of material culture processes from generation to generation and the overlapping maps of language variations, design traditions, and

ethnic identification is certainly not coincidental. Using this approach, the detailed nature of the tools or objects in use by a people is just as much a marker of their ethnicity as language, racial classification or geographic dispersion. It makes the link between material culture and identity one of co-dependence.

3.5 COMBINING APPROACHES: A CASE STUDY

In this next case study three of the key conceptual tools of archaeology that we have thus far explored — *artifact assemblages, absolute dating, and ethnic identification* — are combined and the data mapped out in chronological and geographic dimensions to create a stellar and compelling picture of prehistoric demographics. ‘A model for the Guarani expansion in the La Plata Basin and littoral zone of southern Brazil’ takes many of the methods and theoretical positions discussed thus far and brings them together at a macro-scale (BONOMO et al., 2015).

The paper, published in 2014, offers a robust and multi-layered approach to using culminated data from 1,177 previous studies of individual sites. With this deeply grounded and quantitative approach they are able to build out an expansive model of the movements of the guaraní cultural-ethnic group that directly challenges the previously accepted ‘routes’ of cultural dispersion (DRM - dispersion route model). In a sense, the project works backwards, highly inductive, using ‘metadata’ to make a convincing case. This study demonstrates a hybrid of the key aforementioned components that characterize basin archaeology: clearly defined ethno-cultural groups (associated with specific artifact assemblages), strong insistence on positivist principles (carbon-14 samples, digital elevation models, by way of example), and a primary interest in modelling the peopling of the geography by this specifically defined group.

It begins with the supposition that the maximum area of use of the guaranÍ language, based on historical evidence from the arrival of the Europeans, can be followed backwards with the artifactual assemblages that have come to be associated with the ancestors of these very same populations. This connectivity between linguistics, artifacts assemblage, and cultural groups is the trio of epistemological markers that make a study like this possible. The archaeologically derived guaranÍ-associated assemblage is described as follows:

> Traditionally, historic Guarani people and their immediate prehistoric ancestors have been identified in the archaeological record based on the occurrence of the following features: 1) ceramic dishes, shallow bowls and large jars (mainly restricted orifice, conical base and complex profiles with angle and inflection points), 2) corrugated surface treatments of the vessels, in addition to nail-incised, brushed or painted (red and/or black lines over white slip), 3) lip plugs named *tembetas*, 4) polished-stone axes, 5) secondary burials in urns and/or 6) bounded dark sediments named patches of *terra preta* sediment, associated with households and other architectural structures. (BONOMO, et al, 2015, p. 55).

Citing Donald Lathrap and Aryon Rodrigues as frontrunners in the application of linguistic derivations of a mother tongue analysis (in this case Proto-Tupi) and, later on, J.P. Brochado marrying this approach with the archaeological records, especially pottery types, of the diverse, associated Tupi populations, Bonomo gives a historical overview of how this particular artifact assemblage came to be considered diagnostic of the cultural group.

Once the assemblage and the cultural grouping are both accepted as valid, it's a matter of collecting as much data as possible from excavations where these assemblages have popped up. With enough C-14 samples from as wide as possible variety of sites, the dates, artifact diagnostics and site locations can be cross-referenced to build out a convincing chronology of the whereabouts and diffusion of the cultural groups, not as *proven*, but as *indicated* by the data families.

In this project report, we don't come across *people*, so much as *populations.* There is a bird's eye view of human behavior that lurches towards inevitability in their choices. The guaraní communities represented in these demographically oriented studies exploit opportunities, fill niches, expand into territories, and refine their technologies over time, but there is little sense about the motivations behind these decisions or tendencies. Perhaps, when approaching human activities in this overtly strategic survival-oriented light, the need to feed mouths and produce offspring (two contradictory aims), are the only motivations needed.

It is interesting to notice that the concepts of individuals and their agency, cognitive behavior, decision making, and beliefs can remain essentially absent from a study when pursued from this lofty of an epistemic perch. It's always interesting to consider how individual agency,

creativity and ideology may have contributed to the dynamics of population demographics, even if they aren't brought into the discussion at this level of large scale data crunching. *Would a different cultural group, given the same environmental conditions, follow a different demographic path?* Probably.

3.6 *HOW* DID THEY THINK?: ONTOLOGY, CULTURE & IDEOLOGY

3.6.1 THE CHALLENGE OF CULTURAL INTERPRETATION

My working definition of culture for the purposes of this text is: *a place where two or more ontologies meet*. In this arrangement personal ontologies are the biographically-informed, chemically-composed, iconoclastic, and subjective worldview that each individual brings to the *cultural* interaction; and culture provides an interface for the interactions, or as Roy Wagner (1981, p. 34) defines it, "'culture' provides a relativistic basis for the understanding of other people". The seeming impossibility of communicating one's inner *subjective ontology* to another individual is where the relativistic component of cultural exchange appears and reveals its potentiality and limitations. (SEARLE, 2015). It is always open to nuance, misunderstandings, multiple interpretations, and distortion — even amongst members of the same cultural 'milieu'. These attempts to exchange internally situated cognitions requires some form of *language*, not necessarily in the spoken or written form, but a symbolic language nonetheless — so there are mutually utilized symbolic building blocks that when arranged construct a loose meaning that can be understood in a multi-individual space (a social space). These component parts and their respective 'syntaxes' may take the form of art, music, bodily gestures, noises, or any number of semiotic manifestations, including material culture.

This symbolic exchange and the meanings embedded within the scope of any given 'language' — be it syntax (structure) or vocabulary (individual signifiers) — can only be approximations of individual experiences due to the limits in the degrees of subtlety and level of detail that can be realistically transferred in symbolic form. In this sense culture can act as a shorthand form of communication amongst people of a given society in order to express ideas,

disagreements, maintain or alter power dynamics and so on, but the reality is that the larger part of each individual's private experience of the world goes unsaid and unregistered.

Where do we find evidence of this cultural exchange in the archaeological record? It comes to us in an interminably varied number of forms: written languages, visual graphics, textiles, use of colors, use of patterns, and sometimes in the form of evidence regarding the movement and use of bodies within the physical space; i.e. cultural behaviors, such as sex, eating, sports and warfare. In terms of *decoding* a material culture language, the depth of the contextual information, the quantity and reliably of meaningful data, and ability to draw analogies to other cultural contexts (often in the form of ethnoarchaeology), are all essential to making a case that some level of understanding of a past culture is being achieved. It is by no means a straightforward or formulaic task.

All that being said, even a perfectly preserved 'carbon copy' of an entire material cultural context (Pompeii is the most renowned archaeological example) is not enough to claim a bonafide firsthand ontological *comprehension* of an other society, but only works to buttress likeliness of interpretation by means of greater access to epistemically objective data points and the subsequent epistemically subjective interpretations thereof. [The persistent and unavoidable bias of the researcher's position and interplay between the researchers own cultural baggage and that of the object of study are discussed above in section two.]

If anyone has ever suffered through the drama of miscommunication in an important discussion, had a difference of opinion regarding the quality of work of art, felt out of place at a party, or gotten lost while following someone's directions, we know that even amongst social and cultural 'peers' our means of conveying information to one another is riddled with ambiguity, multiple meanings, subtexts, and in a constant state of flux and reinvention. Surely this elasticity and interpretive quality of culture existed in past contexts as well and that must always be kept in mind when making the case about the meaning of cultural components.

Few archaeological artifacts or contexts offer a blatant meaning in the form of art or symbols clearly designed to convey an intersubjective message. However, when speaking of culture manifestations most broadly, we can recognize that all aspects of the material world, including tools, clothing, kitchenware, even the landscapes themselves, have emotive and social

significance, both held collectively and on individual levels, that exist below the surface. (KNIGHT, V. J. JR., 2013). These contextualized meanings are difficult to confirm or ascertain archaeologically, especially when the material record is scant, but that hasn't prevented serious consideration and attempts to understand what Ian Hodder calls 'arbitrary meanings' bestowed on objects that transform them into signs. (HODDER, 1995).

Even at the familiar level of a fully fleshed out written language these 'arbitrary signifiers' are at work and, in this sense, Apart from the obvious fact that both disciplines are in constant dialog with the present and the past, history and archaeology have much to offer one another. They both attempt to feed this dialog with the fuel of source material whose — whether it be in the form of written text or in a material culture context — original full sense or intentionality is never fully reconstructed. Some mid-20th century thinkers like Derrida, Barthes, and Foucoult have even gone so far as to not only claim the impossibility of useful interpretations of a source's original intention, but have offered the idea that the search for an original meaning is not even a desirable or useful goal:

> [...] one of the more challenging features of postmodern culture has been a deepened scepticism about the traditional humanist project of interpreting texts *[we can insert archaeological remains here in our case!]*. Given this development, it seems well worth asking anew how far it remains defensible to speak...of recovering the motives and intentions of authors *[designers and users]*, of ascribing particular meanings to their utterances *[their artifacts]*, and of distinguishing acceptable from unacceptable readings of literary or philosophical texts. (SKINNER, 2002, p. 90-910). [author's italics]

Setting aside the possibility/impossibility or usefulness/uselessness of the task for the time being, it is the case that history and archaeology *both* rely on physical source material. In the case of history, primarily documents of the written kind; with archaeology, material remains that may or may not include some form of written language. In the mode of the historian, we have an *excavation of text*; in the mode of the archaeologist, the *reading of material*. The historian, at times, has the distinct advantage over the archaeologist of being *spoken to* by the

author (or in the case of archaeology, the one acting upon or with an object) and sometimes directly offered the purported intentions, but even this requires looking outside or around the material source for a more fleshed-out interpretation:

> [...] it has been asked whether we can recover the author's intentions from his text without becoming imprisoned in the hermeneutic circle. The answer is that this may indeed be a danger when we have no evidence regarding the intentions other than the text itself; in practice, this is sometimes the case but not always. There may be evidence, unreliable and treacherous but still usable, from the author's other writings or his private correspondence;...The more evidence the historian can mobilize in the construction of hypotheses regarding the author's intentions, which can be then be applied to or tested against the text itself, the better his chances of escaping from the hermeneutic circle […] (POCOCK, 1985, p. 4).

Now, just as the original user or users of an artifact can have deep and hidden associations with the item in question, the archaeologist brings their own mental, linguistic, and psychological *vocabularies* to the interpretive dialog:

> [...] there is a [...] kind of back and forth motion. [..] in coming to understand, we relate the informant's opinions and views to our own opinions and views. This involves a playing back and forth between the social and theoretical context of the interpreter, and the historical and theoretical context of the interpreter, and the historical and cultural context of the object of interpretation. Both the interpreter and the object of interpretation contribute to understanding, always generating a new, hybridised meaning. In this sense, whether we like it or not, we think ourselves into the past. We need to be aware of this and we need to do it critically. (HODDER, 2003, p. 196).

We thus find ourselves in a methodologically irresoluble dilemma: that every history, while in process and as occurrence, is something other than what its linguistic articulation can establish; but that this "other" in turn can only be made visible through the medium of language: "A dual difference thus prevails: between a history in motion and its linguistic possibility; and

between a past history and its linguistic reproduction. The determination of these differences is itself a linguistic activity, and it is a concern for historians". (Koselleck, 2004, pg. 223).

So if so much slipperiness and doubt persists even in attempts to understand an author's intentions laid out on the written page what hope do we have for attempting the same with the seemingly much-less approachable 'language' of visual and material communication? Perhaps the answer lies in emphasizing the fact that meaning-making contents of visual languages are not performing the same cultural tasks as that of the explicitly linguistic:

> In this sense, material culture undertakes expressive tasks that language does not perform or cannot perform. In addition, as a means of communication, it has less explicit messages and its interpretation is less conscious than those of language. Because of its more conspicuous character, material culture is allowed 'to carry meanings that could not be made more explicit without the danger of generating controversy, protest and refusal', such as, for example, differences in status. (SILVA; 2010, p. 119).

With this glass-half-full conception of material culture and its potential ideational components, we wouldn't stay so hung up on what information *isn't* in the messaging and can rather, more comfortably focus on an interpretation of what information *is* there. For any fruitful pursuit of cultural understandings of the past, these are some key considerations.

3.6.2 REGIONAL EXAMPLES

Regional approaches towards cognitive archaeology being employed in the *basin archaeology* are represented here by three studies executed at very different scales of analysis: firstly, Jose Iriate, Silvia Cope and team's landscape-level study of proto-Je mound complexes' potential ceremonial implications; secondly, Cabrera Perez's analysis of Uruguayan rock art, and finally, Sergio Baptista de Silva's survey of Guarani cosmological messaging in artifact iconography. All three studies are notable in that they insist on employing rigorous

data-collecting models and, perhaps unsurprisingly, draw heavily on ethnoarchaeology to make their cases.

Landscape archaeology (introduced previously in section one above) offers potential information regarding collectively held ideational aspects of past societies. In contrast to Rafael Milheira's study of the strategic and potentially political aspects of mound complex locations and arrangements in the Patos and Mirim Lagoon regions of southern Brazil; Silvia Cope and Jose Iriate (along with their co-authors Fradley, Lockhart and Gillam) approach the MECs (mound enclosure complexes) of the Pinhal da Serra region to reveal their possible ceremonial and cosmological significance. (IRIATE; COPE, et al., 2012).

Indicative of the interdisciplinary approach marking the standard for contemporary archaeological projects, Iriate, Cope and team employ multiple levels of data gathering at the scales of site survey, artifact assemblages, historical records, and ethnographic reports before making their final analysis. The project began with an extensive landscape-scale survey of the Pinhal de Serra MECs of the southern Brazilian highlands in Rio Grande do Sul, just south of the state of Santa Catarina. These mound complexes and their associated pit house villages have been linked to the broadly defined Je cultural group — a group identified archaeologically by their ceramic styles, pit houses and MEC architecture. The primary focus of their project is linking the arrange patterns and forms of the MECs with sacred funerary and post-funerary rituals. Apart from topographical analysis of the individual mounds, the specificity of individual finds interred within the mounds (often burials), and the use of geophysical electromagnetic imaging, the team also relied on a broad application of historic and contemporary ethnographic accounts of the Kaingang cultural group. Detailed accounts of the more recent ceremonies allowed the team to draw analogous comparisons that may explain some of the telltale characteristics of the MEC arrangements.

The proto-Je MEC sites in question have been dated to beginning around 1,000 AD and the researchers make clear although they are not attempting to connect the finds to any specific historical cultural groups, the cultural continuation from then til now is apparent. Parallels between the Kaingang's ceremonial practices and the layout of the mound complexes can be seen in many aspects, including: "organisation of space in cardinal direction (E-W), topography (low

and high places), dominant symbols possibly related to the cosmogony myth like the mound-mountain association and the circular and concentric spatiality with a central focus on the mound (...)" (ibin, pp. 93). The complex origin myth of the Kaingang further explains the representative aspect of each of these architectural choices, much like the Maya ballcourts or layout of Teotihuacan that can also be linked back to cyclical reenactments of origin stories.

An interesting aspect to note in the description of the Kaingang practices related to the ceremonial separation of the dead and the living, there appear to be aspects that seem related to practical concerns surrounding hygiene and organic health:

> Unlike other traditional societies, where the genesis of diseases is associated to disturbed social relations, such as witchcraft, the Kaingang believe that diseases originate outside the social world; more specifically they believe that their genesis is related to the world of the dead. Diseases come from the *numbe,* the village of the dead. Kaingang mortuary rituals emphasise a relationship of respect and fear to the spirit of the dead including body painting, purification of the widow(er), destruction of the deceased individual's belongings and, importantly, the incorporation of the deceased to the world of the dead. All these actions take place during the *kiki* ritual, whose main purpose is to ensure the separation of the dead from the world of the living. (IRIATE; COPE, 2013, p. 90).

Just as was mentioned in regards to tools and technology in section three above, the functionality and cultural meaningfulness of objects are not mutually exclusive, and yet again, appear to be co-emergent as they fulfill their roles in social practices.

The concept of 'art' is a subset of cultural meaning making and one that defies a singular, universally accepted definition. It's amalgamation of psychology; of both the individual craftsman and of the collective, historical context; as evident in concepts such as *style* and *innovation*, and physicality; the primary materials used by the artist and the remains in the archaeological record, all combine to produce an intractability to a systematic analysis of art that can be applied cross-culturally. The way that art is approached by a culture is surely a reflection of the function it performs in each given society. For instance, european-based societies

celebrate the individualism of the single inspired artist who leaves their mark in the form of personally ascribed 'works' of art. To transfer this limited and unique conception of art — very much based on Europe's specific economic, historical and philosophical contexts — to other cultures would be ill-fitting and misleading to say the least.

In this sense, it is important to consider the use of the term *art* in archaeological literature very thoughtfully. The most obsequious said use in *basin* archaeology comes in descriptions of pictographs and petroglyphs of the region, which are collectively identified as *rock art*. The term 'art' in this instance both restricts and liberates analysis of the forms; the term emphasizes the potential ideational aspects of the designs and deters more practical, functional explanations. Generally we do not consider all forms of visual signs to be art; in our contemporary paradigm visual semiotics that perform a clear function; street signs, math problems, shopping lists and printed t-shirts are generally not thought of as works of art. Because of this ambiguity in the term itself, when used in the archaeological contexts, it should always be remembered that visual culture and art are not necessarily synonymous and, furthermore, that pragmatic and ideological functions are not diametrically opposed.

One way we can consider the inclusion of art and its implications in archaeological literature, is that there is a general sense that following the developments of a culture's *art*, as opposed to other forms of material culture, delivers meanings beyond its formal parts; that it expresses 'cultural values' of some kind. (GELL, 1998). With this next case study, from Uruguay, we can see just how daunting of an epistemological task a search for 'cultural values' is when working with prehistoric visual culture.

In the paper, 'Early rock art in Northern Uruguay' [*author's translation]* (CABRERA PÉREZ, L., 2012), Peres offers an overview of the discovery, project developments, successes and challenges facing the protection and understanding of these unique petroglyphs. It must be noted that the rock art of the *basin* region is not confined to Northern Uruguay, but part of a wider regional spread of petroglyphs throughout the region; including significant finds in Quarai, Rio Grande do Sul, Brazil; finds in the provinces of Corrientes and Misiones, Argentine; and clusters of rock art in Amambay, Paraguay. In all of these regions, however, the rock features their iconoclastic designs and techniques indicating a diversity in cultural provenance.

The eventual survey of the region under question is notable for the bureaucratic complexity and lengthy development of the eventual coming together of elements that allow the project's execution. The first rock art discoveries gaining any scientific attention in this particular region (department of Salto) were made in 1995, spawning a project that wouldn't begin it's work until 2009! During those eight years of planning and bureaucratic wrangling many institutions would be involved, including: The Salto Departmental Museum, The Minister of Education and Culture, UNESCO, and even visiting researchers from the National History Museum of Paris, France. However due to an on-going tightening in financial backing, the project that emerged in 2009 was reduced in its scope of aspirations for the research; now intent on performing a general survey of the area's rock art, rather than direct sampling and preservation. The finds were impressive — literally thousands of individual designs were registered, both isolated and in groups. The documented finds were all generally described as 'abstract' in kind, with individual designs described as 'zig-zags', 'arches', letter 'V' or 'U', 'rectangles', 'undulations', and 'crosshatches'. (CABRERA PEREZ, 2010, p. 743).

Although Perez's paper completely avoids any direct attempt at interpretation of either cognitive or practical purposes contained within the designs, he does acknowledge it remains unclear what explanatory role the art itself will offer future investigations:

> Within it and in its time, the social field is constituted in various ways: magic, survival, territoriality, communication, play, language, etc. The great challenge is choosing which element to prioritize when having to address a huge area of more than 50,000 km2, lacking chronological information, even of a more general nature. The objectives, on the one hand, have been oriented based upon the most well-known prehistoric manifestations of the region — petroglyphs. On the other hand, (there is a desire) to seek to know through material culture the implicit socio-economic systems, their structures, their changes and transformations. (CABRERA PEREZ, L., 2010, p. 747) [*author's translation]*

In this instance, we can see many factors stand in the way of reaching a satisfying understanding of rock art designs such as these and, again, the concept of a visual *vocabulary*

embodied in these forms does not lend themselves to decipherment in the way a linguistic model would allow. Alfred Gell re-emphasizes the tempting, but misplaced analogy:

> Art was the (cultural) 'language of visual form'. The dominant position of the 'linguistic model' in cultural analysis in the ethno-science period resulted in the application, to visual 'language' of the linguistic method of decomposition into 'constituents' and the writing of constituent 'phrase-structure grammars', that is, sets of rules about how constituents could be combined into 'well-formed strings', or acceptable 'utterances'. Each culture was imagined to possess, not just a verbal language, but various non-verbal languages, one of which was the language of (artistic) form, or 'visual-ese'. The constituents of visual-ese were forms, typically geometric forms such as ovals, circles, lines, zigzags, and so on. (...) The linguistic model founders because there is no hierarchy of 'levels' in the visual world corresponding to the multiplicity of levels in natural languages, extending upwards from minimal constituents' (phonemes) to morphemes (words) to syntactic structures (words in phrases and sentences, expressing propositions). Lines, circles, ovals, zigzags, etc. are not 'visual phonemes'. (GELL, 1998, p. 164).

Indeed while it is true that we shouldn't expect that prehistoric rock *art* could be read or de-coded in the same way as written language with linguistic-derived hierarchy of components, there can be analogous information represented in at-first-glance seemingly abstract forms.

Specifically in terms of tracking *style* (modifications in forms over times), some kind of chronology or sequencing is required. In the case of the Uruguayan petroglyphs this has not been a possibility. Perez explains that, thus far, no usable organic samples from the contexts of the sites have been recovered that could offer the reliable C-14 dating. For now, the quasi-analogous carved stones, found at nearby Salto Grande and dated at 4600 BP are being used a shorthand chronological market, but as we saw in section five (above) it is not even clear that these items were originally associated with the final deposition in which they were found. The fact that this understanding of the 'why' and 'how' of this massive body of registered prehistoric visual culture is still so underdeveloped, speaks to the need to protect such highly exposed and at risk

remains — a poignant example of where the enormous practical challenge of preserving the archaeological record has very serious epistemological implications.

If a clear definition of *art* has proven to be perennially elusive, the concept of *iconography* has attempted to provide a more clearly specified and manageable approach to visual culture. According to the subfield's pioneer Erwin Ponofsky (apud. KNIGHT JR., 2013), iconography concerns itself exclusively with the meaning and subject of visual culture, rather than form or style. As Vernon James Knight, Jr. lays out in his text on iconography and its application on the pre-Columbian visual registry, there have been two main approaches to iconographic interpretation when historically-contemporaneous literature is not available as an option.

Firstly, one can attempt to gather all associated images (from the same cultural context) and build-out a self-contained model of configurations and associations between component "gramphenes" (elementary visual units) — inferences could then be drawn. This is described as the 'configurational model'. A second strategy is to bring in extant and relevant ethnographic information that seems to be analogous — in the case of the study below, the ethnography is literally from the same descent cultural-linguistic groups, the Guarani. When both methodologies are used in tandem and if they support each other, the conclusions drawn would appear to be more likely, but Knight reiterates the inconclusivity factor:

> As analysts attempt to reconstitute the models to the best of their ability, they must humbly recognize that their *competency* in these models will be minimal and can never approach that of the artists or their audiences, especially in the esoteric referents of the images. (ibid, p. 20).

Sergio Baptista de Silva's interface between culturally-representative contemporary interlocutors from the Mbya, Nhandeva and Kaiowa ehtnic groups and archaeological artifacts from broader Guarani context, presents the challenging complexity and the potential epistemological rewards latent in this particular ethnoarchaeological approach to iconography. The contemporary representative groups, da Silva points out, are often rich banks of knowledge regarding temporally distant practices, because contrary to the idea that their ever-increasing

contact with an encroaching 'globalized' cultural model would extinguish native practices, it often has the opposite effect and acts as a internal motivation to double-down on such methods of cultural identity and survival. (BAPTISTA DE SILVA, S. pp. 120).

The organizationally complexity of the Guarani cosmological model and its component parts is quite jaw-dropping. This extends to its arrangement in both linguistic and associated visual forms. Each independent design element (*nhande reko)* are all given two names — one practical and descriptive (such as 'zigzagged line'), and the other sacred and significant (sacred butterfly) (ibid., pp. 123). This bifurcated, yet codependent identification scheme allows the icons to work their formal (purely visually descriptive) and functional (imbued with a sacred power) roles simultaneously in an individual visual motif. To analyze each *nhande reko* Da Silva surveys the use of these iconographic markers in smoking pipes, basketry, instruments, drinking vessels, wooden furniture and carved figurines, in each case asking the Gaurani interlocutors for the designs' significance.

A majority of the individual design motifs represent specific elements from the natural world's flora and fauna, elements which are also the principle players in the culture's canon of creation stories. Therefore each 'abstract' design signifies usually a specific species of animal which in turn plays a role in the cosmological drama. By way of example, variations in basket weave can each reproduce the scaling patterns of locally familiar snake species; or in some cases a single design motif can represent more than one animal simultaneously depending on the context (idib, pp. 126). Another insight from the study was how the specific material constraints of the given technology may influence which cosmological elements continue to be transmitted overtime. For example, when observing the archaeologically derived ceramic vessels, those with undulating or wave-like designs were not recognized by the modern-day Guarani. Since ceramic production has been nearly abandoned in favor of basketry, it seems only the iconography that could be more readily transferable to the rigidity of the fibrous material components were maintained over the centuries. Of course, this is a hypothesis only, but an interesting nexus of where the ontologically objective materiality may restrict or influence the transmission of ontologically subjective worldviews.

3.6.3 THE INDIVIDUAL IN ARCHAEOLOGY

If cultural manifestations in the archaeological record can provide evidence of exchanges of symbolic information amongst individuals in a socially and environmentally mandated context — what can archaeology tell us about the lives of those individuals which represent the nodes in that network of cultural exchange?

The search for individuals within archaeological contexts becomes more challenging or more likely depending on the specifics of the finds of course. Many highly-stratified political societies with 'strong men' leaders proliferate in their accounts of feats of conquest and legitimize their rulers in the material record. Others have looked for individual craftsmen and women behind the creation of more artifacts by using forensic details — ceramics, lithics, rock art and other forms of material creation can be explored for signs of the person's authorship, left-or right handedness, gender, and age. It is a nascent approach and does not yet have a fully developed methodology.

But aside from these notable inclusions of attempts to unravel the individuality of the persons often bundled together in the archaeological record as societies, a wider, more theoretical barrier must be considered — namely, what exactly do we mean by individuals and surely we must consider what that concept meant to each of the societies in which we are hoping to find them?

> Particular ways of specifying the individual or individuality may arise in all societies, but this does not necessarily entail a specification of subjects as being in any sense unique entities imbued with a distinctive consciousness, will or intentionality. Although naming of individuals is commonplace in societies, i.e. the specification of a subject within systems of persons as distinctive individual beings. In other words names and statuses while specifying persons do not necessarily individuate an autonomous ego as a separate agent with a personalized consciousness and independently constituted mode of individuality. (SHANKS; TILLEY, 1987, p. 62).

In other words, the concept of selfhood and community are not universals and should not be treated as such. Cultural anthropologists have recorded and attempted to understand the dizzying complexity of the ways societies perceive and manifest these relationships and oftentimes language is an enormous barrier to surmount in these investigations. With this in mind the anthropologists and archaeologists could approach the culture with as wide a framework as possible on the outset and let the data provide the information regarding the best way to suss out individuals, families, social roles, leadership, and networks because, inevitably each social arrangement in its surrounding cultural apparatus will offer unique ideas about each of these categories of community organization. (WAGNER, 1981).

Brazilian anthropologist Eduardo Viveiros De Castro has gone far in his attempts to emphasize the leaps in ontological framing between Amerindian 'categorizations' of the universe and their incompatibility with eurocentrically-derived schema. He has developed new terms like multinaturalism, as opposed to the oft-used multiculturalism, that better reflect an Amerindian cosmology that "supposes a spiritual unity and a corporeal diversity. Here, culture or the subject would be the form of the universal, whilst nature of the object would be the form of the particular." (1998, p. 470)

Given that much of these concepts, ethnographically and anthropologically, are derived from peoples of the Amazonas regions of Brazil, it is totally conceivable that the same patterns of ontological perspectives would be applicable to the societies of the *basin* cultural area. This *tabula rasa* approach towards 'other' cultural dichotomies is clearly an exciting way to reframe the archaeological questions that are being asked and the possible answers will surely reflect this new spectrum of ontological reshuffling.

EMERGING APPROACHES AND THE FUTURE OF *BASIN ARCHAEOLOGY*

This project is meant to descriptive rather than prescriptive and especially as writing from the perspective of an outsider looking in, the future of the discipline is ultimately in the hands and hearts of the archaeological community; the network of researchers, writers, excavators, institutions, communities, professors and students who drive the agenda and formulate the aims. Hopefully the fact that objective and subjective realities are essential for building archaeological understandings of both ourselves and the others has been made clear by the theory and the regional case studies reviewed herein. This final section is a space to consider what this acceptance means in terms of the best approach to archaeology and perhaps how it specifically applies to the *basin region.* Solely for the sake of organizational elegance it has been categorized into three aspects — temporality, phenomenology and the ethical question.

4.1 NEW TEMPORALITY

Presentism has been acknowledged as a very real and salient feature of the social sciences and, therefore, archaeologists would be disingenuous to claim to have escaped the contexts of their own cultural, political and historical surroundings. Besides only opening up explanatory space for the applied use of multivocality, the concept of *multi-temporality* might better reflect and help to enrich the arena in which the discipline usually situates its models — time. The use of multiple temporal models with the broadened spatial approach of *landscape archaeology* might better represent the complexity and nuance imbued in cultural applications of space and time, without watering down data supporting each model. Gonzalez-Ruibal has written extensively about how these layers of time co-exist in our views of the past, and calls there congruence the 'deep present':

> [...]the deep present refers to the multiple pasts and the multiple temporalities that exist in our time. The present is often imagined as solely modern. But modernity is just a temporality among many in the world today. There are other historicities and temporal rhythms. They have been losing terrain under the moden avalanche. But they still exist and resist. Archaeologists working on the recent past have to be, even more than other practitioners, ready to appraise nonlinear time to make sense of a world where time is deranged. They have to revalue other temporalities, as a way to challenge the disarticulated ephemerality of supermodern time. (GONZÁLEZ-RUIBAL, 2019, p. 116).

This powerful idea that individual cultural and social groups indeed have their own temporal maps doesn't disallow the archaeologist to apply their use of *relative* and *absolute* dating techniques — those tools help reinforce *their particular temporal* research regarding *their particular ontological priorities*, neither does it render the on-going research questions regarding cultural diffusion, technological innovations, or the movement of population groups through the environment. However, it recognizes as co-equal the temporalities that those from other cultural contexts may use to structure their time and prioritize certain events and cycles over others. Perhaps this acceptance of multi-temporality can help clarify, rather than further confound, those instances when a living population and archaeologists priorities about what aspects of the past hold most relevance do not align.

In summary, all research subjects of the *historical* period sit on the foundation of a *prehistoric* era; and prehistory is inevitably viewed retrospectively through the filter of subsequent historical themes; and, finally, both historic and prehistoric periods can only be discussed and perceived in the *present.* Therefore a synthesis and dialectic between the prehistoric, historic and the present is already at play in archaeology, and as it is becoming fully acknowledged and accepted as such, this exciting nexus of timeframes presents incredible investigatory and explanatory possibilities.

This can be seen as a liberation of sorts for archaeologists who want to use their expertise to engage with contemporary social, environmental, and political issues. Because it removes the real possibility of 'reconstructing' a perfect carbon copy of some part place in space and time, it makes it not only acceptable, but inevitable that the researcher's own contextual concerns will and should be made transparent in the research report and literature. It is *okay* to connect the past to present concerns — this was already happening anyway, but just being left unsaid, which now strikes us as disingenuous and misleading.

4.2 MATERIALITY and PHENOMENOLOGY

Another development in material culture studies, including archaeology, has been the introduction of phenomenology and its pivot towards the human *experience* of the material world. This readjustment of archaeology would focus on the fluidity and in betweenness of the material and conscious realms, rather than viewing either as fixed entities.

> Phenomenology is concerned with the human encounter, experience and understanding of worldly things, and with how these happenings come to be possible. While empiricism and positivism take the *givenness* of material objects as an unquestioned first principle, phenomenologists from Edmund Husserl onwards have argued that if science is to concern itself with the acquisition of information through the physical senses (in laboratory experiments or field observations) then the character of experience needs to be problematized.
> (THOMAS, 2009, p. 43).

In this framework, the processes of material *becoming* and *unbecoming* objects with the interjection of human activities. Tim Ingold uses the term *morphogentic* or form-generating flow, as opposed to hylomorphic framing which emphasizes a predetermined design plan (mental image recreated on materials by craftsman). (INGOLD, 2013). This '90 degree' re-imagining of the relationship between human and their material cohorts allows us to forcefully emphasize the fact that the character traits and properties of the material itself has as profound an impact on the 'results' of the artifact as the intentions of the objects' human actor:

> Far from standing aloof, imposing his designs on a world that is ready and waiting to receive them, the most he can do is to intervene in worldly processes that are already going on, and which give rise to the forms of the living world that we see all around us — in plants and animals, in waves of water, snow and sand, in rocks and sand — adding his own impetus to the forces and energies in play. (INGOLD, 2013, p. 21).

This way of incorporating human activities *within* the natural processes rather than *in opposition to* erases the line between natural and social forces. It also degrades the idea of artifacts as 'final' products and sees them more as fluid stages along the endless lifetime of the matter of which they are composed. In archaeological areas where artifact preservation is undermined and rendered incomplete by the meteorological, hydrological or historical processes at play, this *morphogentic* acceptance of human-material dynamics as an on-going, rather than closed, process can open up conceptually refreshing ways of approaching the history of human interaction with the environment. This 'updated' thinking differs from the traditional processual approach (already well-established in South American archaeology) in that it further de-emphasizes the artifact or artifacts as the primary players in archaeological epistemology.

Ideologies and ideas are not born in a vacuum-sealed space devoid of physical limits and traits; yet at the same time once humans integrate ideas and beliefs about themselves and their environment they begin to manipulate its physical characteristics with these ideas in mind. It is this 'contact zone', this sinuousness between thought and matter that appears at the heart of

approaching archaeology from a phenomenological perspective. It's appropriate methodological tools have yet to be developed.

4.3 THE ETHICAL QUESTION

Academics working in the humanities are especially self-aware of the ethical challenges brought into focus when framing other humans as research subjects, mostly because they have studied history enough to know that knowledge can easily become weaponized. While most of the modern world simply ignores the past as largely irrelevant to their lives, anthropologists and archaeologists spend lots of energy discussing how to study it ethically. This critical self-awareness is certainly worthwhile, but at the same time should be taken as a sign that the entire project of cultural studies is corrupt or simply colonialism disguised as academica. Most modern-day archaeologists, anthropologists and ethnologists have chosen their careers because they are genuinely interested in learning from and building an understanding of ' the other'; naturally, at times, the analysis or use of language will be off the mark or even ignorant, but breaking down the discipline of archaeology as a whole is a cynical, ahistorical exercise.

Ultimately, regardless of what debates are had amongst the academics and even those conversations in which directly affected communities are offered a space to participate (which should be as much as possible), ethical decisions happen at an individual level. Each researcher, excavator, museum curator, professor, student, and writer participating in the development of archaeological studies is faced with moral dilemmas on a daily basis — often related to the integrity, intentionality, and accuracy of their work. It's ignorant to imagine individuals working within the humanities do not have their own personal preferences, biases, career goals, and knowledge gaps, but ultimately only they themselves can be on-guard against such intellectual transgressions. If the inconsistencies or bigotry of an academic are consistent they will eventually be found out, but to approach the humanities, including archaeology, with a default lens that simply assumes the worst intentions and most callous goals of the discipline is counter-productive, superficial and dull. It could rather be more fruitful to give the researchers who have committed their lives to studying 'the other' the benefit of the doubt that they are pursuing their topics with honest intellectual curiosity, and when obvious omissions, biases or

misinterpretations appear in their work they can be brought to light to improve the research, rather than degrade the merits of the individual academic.

This raises the final, perennial question regarding archaeology — one that has already been offered in the earlier section on Latin American social archaeology — *does basin archaeology by nature need take political position?* Indeed, humans are political and archaeology addresses humanity's past though political lenses, but the complexity of politics occurs on an infinite spectrum. Much like mathematics, design, economics, or genetics, archaeology is a set of tools (methodology) informed by concepts (theory). It can be used to support opposing viewpoints, but ultimately one of the two positions will be shown to be supported by better practice, logic, intellectual integrity, and ultimately, more closely aligned with reality (both objective and subjective realities). In this sense archaeology should be viewed as neutral, but as powerful in its ability to support various ethical and unethical aims.

In this sense, perhaps the future of archaeology is not so much driven by the questions that interest archaeologists, but perhaps archaeologists will be assisting fields by providing the evidence that is needed about humanity's past. Whether in regards to environmental concerns and historical ecology, social justice and creating a more accurate historical narrative, rescuing dying cultures, a deepening of our cosmological developments, recreating ancient technologies, architectural salvage and reconstruction operations; or revising our view of role of genders throughout history, archaeology is necessary in all of these ethically-directed pursuits, but this does not mean every archaeologists would be expected to be equally engaged with or equipped with the expertise to assist in each of these important moral projects.

CONCLUSION: WITHIN AND BEYOND THE *BASIN*

Just as the contextual factors — political, historical and social — have influenced the first century of *basin* archaeology's development, their inevitabile influence on the future of the discipline is one of the only predictable factors. But as these cases studies and their discussions have hoped to illustrate, the research aims and approaches applied are anything but a given. The archaeologists of the *basin* will have to define the research agenda based on what they and their constituent communities consider the most relevant and necessary goals. Time and resources are limited and do not allow for excavation and investigation into every interesting and potentially data-producing archaeological context. The environment continues to undergo transformation and development, and even with stringent laws in place to protect cultural heritage from destruction, the loss of evidence is on-going and impossible to avoid completely. Important choices must be made including both intellectual and ethical considerations.

The flexibility of the application of archaeological methods to varying theoretical models is both its promise and also its challenge. As a close cousin to history it can be used to support narratives that both reinforce or dismantle the status quo. It's findings can deepen our understanding of the human-environmental ecological interactions, or take on questions of a spiritual and cosmological nature. It can provide opportunities for community engagement,

education and responsibly managed cultural tourism revenue streams, but also be a means of exploiting and fetishizing cultural heritage. In other words, archaeology does not dictate the final product of its processes — this applies to the *basin*, as much as any other region.

Unfortunately, the short-term economic prospects of the *basin* countries is uncertain at best, and rather dim at worst. As financial restraints are applied across governmental, institutional, and privately-endowed bodies that support academic and cultural projects, the resources allocated to archaeology generally stagnate. *Basin* archaeologists will have to continue to be creative and spartan in their application of their limited resources, but most importantly, these limitations doubly emphasize the importance of theory in the decisions that are made about where, when, and how to expend valuable research capital.

Hopefully the final distillation from the contents of this paper is clear enough: archaeology casts two extremely wide, but distinct epistemic nets: it can be used for collecting data regarding objectively-oriented past events when it behaves as a *natural science* with the human species as its locus. However, it can also approach subjectively-based realities of individuals' inner lives and their cumulative inner experiences in the form of an interpretive *cultural science*, unpacking less obvious meanings within the physical manifestations of the archaeological record. They both affect the inherent qualities of the other. Though archaeology has attempted to maintain this balancing act between these two very different bodies of knowledge, this paper proposes the distinction is less problematic when clearly recognized and one of the two epistemic lenses is used, rather than a murky blending of the two.

With the discipline’s ambiguity less glaringly obvious, archaeology can come to be seen as a methodological and theoretical toolkit for problem-solving (in practical, academic, political, environmental, historical or philosophical arenas) and not relegated to existing under the presumption that its primary goal is to narrate prehistory. This will open up the techniques to be used in creative new ways, render unnecessary the theoretical tail-chasing and put archaeology in the central role of providing an intellectually honest bridging between the abstract and the physical — something so many existentially and pragmatically daunting challenges of our era demand.

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ANNEX: INTERVIEW TRANSCRIPTIONS

INTERVIEW: FR. PEDRO IGNACIO SCHMITZ and DR. JAIRO ROGGE

Date: Sept. 19, 2019

Location: The campus of Unisinos (Universidade do Vale do Rio dos Sinos), RS, Brazil

John: Obrigado formalidades vamos começar né, primeira questão o valor de artefato, né hmmmm,

Nesta questão de agora nos estudos da cultura material , obviamente novas tecnologias estão criando nova forma de arqueologia para vocês, na questão para vocês o valor de artefato para você e no geral o valor do artefato no futuro?

Rogge: Penso que a arqueologia ela foi desenvolvida na verdade como disciplina, como ciência, para lidar como cultura material, todo o enfoque da arqueologia, claro, ela vai muito além disso, o artefato é a essência eu acho da disciplina, este artefato, é o que realmente, nossa fonte de informação né, é aquela nós buscamos então a partir da pesquisa de campo, mas hoje não só campo, as instituições e a nossa aqui é um exemplo tem, acervo enorme né, de..., de..., material arqueológico, vídeo, cerâmico, orgânico e (), também é uma fonte potencial não só buscar em campo, mas trabalhar também com acervos já estabelecidos é fundamental, mas o artefato tem esse valor intrínseco, eu acho, que a arqueologia né... ela pode e deve pensar além do artefato, mas ela nasce eu acho, a partir né, do estudo do objeto né (), então este objeto é fundamental e para isso claro... falar em... (pausa); Métodos e técnicas de análise é falar numa multiplicidade de (pausa) coisas né... que vai desde a análise do objeto a partir de metodologias já conhecidas né..., de análise de cerâmico, mas inclusive chamando para estas análises que hoje é muito comum na arqueologia que é trazer, uma série de outros... outras áreas de conhecimento para também

trabalhar com (pausa) o artefato. Então... (pausa) o papel do artefato ainda continua sendo né... apesar de toda a mudanças, novas tecnologias que aparecem, ainda continua sendo este inicial que a partir dali, a gente pode extrapolar para outras áreas, para outras formas de pensar, de pensar a construção do.. (da... do...) passado a partir da... (pausa) do olhar arqueológico.

Padre Inácio: Para mim do artefato é a âncora, para eu ancorar meu navio que vai estudar culturas, então ele é aquele elemento, que... () me liga, que me firma, para eu poder estudar aquela população, pode ser uma população biológico, pode ser uma sociedade, pode ser uma outra coisa. No aspecto que o John já colocou estou acrescentado neste sentido, quer dizer que... tendo um objeto ele me liga, com uma determinada população, com uma determinada cultura, com uma determinada sociedade.

Então eu posso fazer análises das mais variadas, depende do que, que eu pergunto sobre este artefato, pode responder sobre (pausa), pode responder sobre técnica, pode soube responder sobre sociedade, se é um esqueleto pode responder sobre biologia, quer dizer, ele pra mim, ele é elemento que liga as minhas preocupações com um material passado. Como uma âncora.

John: E neste sentido é interessante né..., porque eu estou pensando muito sobre história. (Padre Inácio) Sim! E ... se por exemplo, vocês vão pesquisar uma sociedade moderna, para focar nos artefatos materiais também ou usar escritos como formas de artefato?

Rogge: Eu penso que também, o artefato, acho também, o objeto, eu não consigo pensar nesta reconstrução, reconstituição né..., de um passado mais remoto, mesmo passado recente né..., ou algo mais atual, como essa arqueologia do presente, né, sem partir do... mas eu acho, claro que existem outras formas também de tentar, mas eu penso o objeto é (pausa) ainda continua sendo o elemento fundamental para pensar outras formas de (pausa) escrever esta história.

Padre Inácio: Repete a pergunta.

John: Tem pessoas, tem pesquisadores que tem foco na pré-história, e outros focam na história mais contemporânea, estão questões de tipo de fonte ou algo diferente?

Padre Inácio: Nós temos um projeto agora, que estuda as estâncias jesuíticas do tempo das reduções, a partir do que, das ruínas, as ruínas vão ser o primeiro discurso, eles vão dizer o que que são como era, e a partir disso eu tiro conclusões, a partir da cultura material, mas depois eu vou procurar o documento correspondente, em princípio nós estamos analisando, ruínas, quer dizer, elementos materiais, que tem uma quantidade enorme de informações, da estância que são moradias, tem os currais, tem os potreiros, que são a primeira colocação, e depois disso eu vou perguntar, quem morava nisso, quanta gente era, como é que fazia os serviços, então junta, a parte material, ela para nós é fundamental, existem várias dissertações e teses sobre instâncias, sempre sobre papel, nunca sobre estância. Então estamos começando a coordenador disso, onde nós partimos para a parte material, para entender o que que é isto era, e como isto funcionava, sem precisar fazer escavação as ruínas estão em pé, nós não fazemos nenhuma escavação, nós só fotografamos, e olhamos satélite, e pensamos o que isso pode representar, então eu vejo neste

caso concreto, que é o projeto que estamos executando agora, como a cultura material, que é o primeiro material que eu interrogo. (pausa) Pois eu ainda vou procurar, eu poderia ter partido do documento, mas eu como arqueólogo eu prefiro partir...

Rogge: A materialidade, para o documento, e claro, buscar outras formas, se eu tenho possibilidade de usar outras fontes, para crescer o trabalho, claro que eu posso buscar, coloca ai a essa arqueologia do presente, eu ainda não sei bem o que é esta arqueologia do presente, mas enfim...Se tem visto muito, só pegar por exemplo, a relação de simpósios, do nosso congresso da SAP, que vai ocorrer agora em novembro a gente vai ver uma infinidade de arqueologias, então de alguma maneira salutar pensar algumas outras coisas, mas eu acho que ainda, a base é como o Padre Inácio falou, a partir do objeto, e como eu penso também a partir do objeto. Da medida que for possível, por exemplo da arqueologia histórica, pode se incorporar obviamente fontes históricas, documentais, não tem problema nenhum, eu penso nessa arqueologia do presente, sendo o que for, que não possa incorporar fontes orais, mas acho que o princípio está ali, na materialidade a partir disto então, explorar as possibilidades.

John: Vamos continuar...

Esta terceira questão aqui agora, (não entendível), sobre biografia de Padre Inácio… Você poderia descrever um pouco sobre sua infância, em Bom Princípio? Como era a vida lá?

Padre Inácio: A vida de um pequeno agricultor, que tinha o suficiente para comer, se plantava o que ia comer, se não plantava não tinha onde comprar, tinha que se produzir tudo então a alimentação era a partir do que se produzia, as outras coisas, casa... nós tínhamos uma casa, de uma “tradição”, uma propriedade, as roupas só as coisas mais “finas” se comprava o resto a mão vazia, é... uma vida assim muito, não tinha nenhum dinheiro para gastar em qualquer coisa, é uma coisa muito, pobre no sentido de hoje. Era suficiente para viver, como qualquer camponês do mundo inteiro, assim, eu continuo sendo um camponês, eu ainda incorporou aqueles valores, precisa pouca coisa, se contenta com poucas coisas, têm valores tradicionais, quando religioso é um valor forte, e isso era o que marcava nossa igreja, meus pais geraram onze crianças, três morreram pequenas, então... o nascimento e a morte eram coisas do diário, quando eu nasci morreu minha irmãzinha mais velha, três anos depois morreu outra irmãzinha, então, era uma vida dura, sacrificada, não tinha dinheiro, para qualquer gasto extra (...) nossa família era, bem colocada a sociedade pequena num povoado, nós éramos iguais a todos aos nossos vizinhos todos, éramos pequenos camponeses, os antropólogos estudam, eu ensinava isso nos tempos que eu lecionava antropologia, eu continuo sendo um camponês, sou bem consciente, eu sou tradicional, sou conservador, eu sou religioso, não preciso, não gasto quase nada, eu não sou assim de cada dia buscar uma coisa nova.

John: Você lembra que no seu tempo livre, nos fins de semana, você tem tempo para brincar com seus irmãos?

Padre Inácio: Isso é uma pergunta de cidade, interurbano, não é uma pergunta de camponês não.

John: Porque você não tem tempo para os finais de semana?

Padre Inácio: Não, é que, domingo, sábado se trabalhava, crianças, quando não estavam na escola, de manhã na escola, de tarde eu ia trabalhar no campo, pegar a enxada e trabalhava, então domingos era uma comunidade católica, domingos tinha missa, de manhã tinha um almoço do meio dia, de tarde tinha outro culto religioso as duas, antes desse culto não se podia sair para passear, então se tinha de tarde umas horas para você visitar seus amiguinhos. Ponto. Não tinha essa questão por exemplo de brincar. Essa é uma questão muito mais moderna, tempo, camponês não tem isso ele mistura o trabalho e a religiosidade e as obrigações dele, na realidade o que sobrava, era uma parte do domingo da tarde.

John: E parte do ambiente, agricultura, tem acesso à floresta? Áreas mais naturais?

Padre Inácio: A gente vivia dentro disso, essa é uma pergunta moderna, da arqueologia do futuro, nesse tempo era uma convivência da gente fazia parte, tinha tudo isso, no domingo de tarde a gente podia ia pescar, pescava lambarizinho, o papai gostava de caçar pomba no mato, quando no terreno sempre tinha uma porção de mato, então as questões colocadas são diferentes daquelas questões que nos colocamos hoje, você colocou uma questão urbana. De um pensamento urbano, urbano separa obrigação e diversão, coisas assim. Isso nunca (inaudível) muito pouco, tinha naturalmente as festas, de vez em quando, não tinha essa separação entre trabalho, (John – criação), Padre Inácio – não separava esses itens.

John: Você respondeu um pouco sobre isso, mas naquela época da sua vida você tinha consciência da sua história, do passado, consciência do passado, o que aconteceu mais tarde na sua educação?

Padre Inácio: Nós tínhamos uma festa, uma festa da padroeira da igreja, em que apareciam todos os parentes, que tinham todas as famílias com um representante, da vinda de nossa família da Europa, uma agenda que se repetiu, e que se repete hoje, eles sairão da Alemanha em mil oitocentos e vinte oito, embarcaram num navio na Holanda, e a tempestade os destroçou na frente da Inglaterra, o navio foi abandonado pela Marujada, a família ficou um ano na Inglaterra no porto, até que a princesa brasileira mandou resgatá-los e que depois se estudou cientificamente e que corresponde mais ou menos ao que era. E quando eles estavam no navio, naquele tempo se faziam aqueles juramentos, aquelas promessas, para todas as gerações futuras, no dia que eles desembarcassem no brasil eles e todas as futuras gerações celebrariam, e todo ano e isso nós fazemos. Tem toda uma história, uma lenda, que toda essa geração de mil oitocentos e vinte oito, minha família chegou aqui, era lenda, eu tenho uma história do passado eu lembro da chegada da Europa, e descer, e se arrependia, se renova e se atualizava, no ano, e aquilo vinha de volta, fazia parte da nossa raiz. Na nossa família todo mundo eram grandes leitores, nós tínhamos muitas pilhas de revistas da Alemanha, que a gente assinava, o pai a mãe, os meus irmãos todo mundo no fim da missa de domingo, pegava um romance ou uma coisa assim na biblioteca da igreja, tinha uma grande biblioteca, se lia, então minha família era uma

família de camponeses, mas muito ligadas a Europa, tinha revistas, as revistas missionárias, as revistas... essas outras revistas, pilhas de coisas.

John: Sobretudo...

Padre Inácio: Principalmente, as mais importantes eram religiosas, mas tinha também sobre outros temas, essas revistas ilustradas grandes, também tinha, isso fazia parte da minha família toda era bem letrada, eram pessoas que se moviam bem no mundo, vivem essa vida simples do camponês estava bem conscientes disso e consideravam essa maneira de vida a melhor maneira de viver no mundo. De fazer oposição à vida urbana.

John: Sim!

Padre Inácio: É o típico camponês que tem todo o seu sistema de vida, e que acha ruim, e que acha que a cidade os perverte. É um valor, que se era um valor universal no mundo inteiro, só os andaluzes e os sicilianos não tinham esse valor, isso eu ensinei na antropologia, todos os outros camponeses, americanos, trabalhos americanos sobre isso, mexicanos, brasileiros, chineses, alemães e italianos. É um valor, e eu sou bem consciente, eu fui professor de teoria antropológica a vida inteira, então, eu tenho um conceito, eu sou um camponês (John – até hoje) Sim!

John: Eu tenho uma questão para você, similar, sobre a interação entre consciência, antropologia, arqueologia em geral.

Rogge: Eu tenho uma vida num contexto bem diferente do Padre Inácio, que é um contexto urbano, nasci e criei, até 19, 20 anos de idade, numa cidade do interior pequena, cidade 50 quilômetros daqui que é Taquara. (pausa) Mas assim, apesar de um determinado momento, eu devia ter uns 12, 13 anos eu ganhei, eu me lembro até hoje, devia ter, uma série prisma, só livros de bolso pequenininhos, capinha preta, e no meio tinha um de animais, pré-históricos e um de arqueologia, eu lia aquilo, animais pré-históricos era mais voltar a paleontologia, mas eu nunca me chamou muito atenção, eu li gostei de ler aquilo ali, mas (pausa) depois já terminando o ensino médio, uns 16, 17, por volta de 17, 18 anos (pausa), me chamou atenção um colega, um amigo na verdade, morávamos próximos, que é já falecido, que é o André Luiz Jacobus, que ele era arqueólogo e atuava, Taquara tem essa vantagem nesse sentido na arqueologia, que lá desde a década de 60, está sediado o museu estadual, museu de arqueologia do estado, o MARGS que agora está fechado, para visitação pelo menos.

Então como eu conhecia já desde criança o André, quando eu terminei o ensino, o ensino, o ensino médio, e ficou aquele vácuo, bom e agora... (risos), aí conversando com o André, só quem sabe tu vai lá, e assim (pausa), de graça, mas então me ajudar a trabalhar lá no museu, organizar o acervo, e eu comecei a ir ali foi o primeiro momento que eu me dei conta realmente da arqueologia, e começar a pensar a arqueologia mais a sério, né, como profissão, ou seja como um né... (John – e foi uma relação com o museu informal?) Sim. Mais informal, eu tinha terminado o ciclo dos meus estudos, eu ainda não "estava" ainda muito decidido como dar continuidade a isso, então nessa conversa com André, e esse pedido dele para começar a ajudar a ele, eu

comecei a ir e durante um ano praticamente lá, até que o André ao mesmo tempo que atuava lá, também trabalhava no anchietano, era bolsista anchietano, lá na antiga sede, lá na sede, (Padre Inácio - era funcionário), era funcionário, até foi professor, chegou a dar aula aqui, aí ele me trouxe, olha tu não quer participar de uma escavação, eu posso ver isso pra ti, ai conversou com padre Inácio e trouxe aqui uma escavação e foi minha primeira vez né, ainda totalmente verde, que foi em Ivoti, Padre Inácio, num sítio bastante importante, naquela gruta, capivara, uma gruta com pontas. (John – em qual ano?) Em 1985, janeiro de 1985, é uma data e um momento, e depois em 86, primeira vez em 85 e depois em 86 de novo. E ali surgiu a possibilidade de conhecer o padre Inácio, conhecer na época os funcionários e bolsistas do anchietano, e a partir dali tomar uma decisão do que seguir para frente, de curso superior, na verdade a minha escolha não foi na história foi na geologia, naquela época até o padre Inácio deve lembrar bem que haviam muitos geólogos, que eram bolsistas ali, 3 ou 4 geólogos (não audível) e aquilo um pouco me influenciou também, e naquele mesmo ano em 85, comecei em março um curso de graduação em geologia aqui na Unisinos, e uma bolsa também voluntária, uma bolsa pelo CNPQ, e foi o início nesta área.

John: E que está até hoje.

Rogge: Não não não. (risos). Naquele tempo no (em) Salvador do Sul.

Padre Inácio: Nesse tempo, esse tempo de alta religiosidade, os jesuítas eram os párocos e era todo uma tradição, era todo uma ideologia também, e o seminarista era uma coisa especial dentro do povoado, ele tinha uma cotação muito alta, e isso não influenciou e não sei porque eu fui eu tinha 12 anos, eu vi todos esses outros, eram mais de 20 povoado, eu sei que eu perguntei, um seminarista que estava desistindo e perguntei como eu faço para ir para o seminário, como que eu faço para ir para o seminário, coisas de criança eu tinha 12 anos.

E aí eu entrei dentro daquele sistema, era um sistema fechado, quer dizer, você, fazia o seu, eu tive que terminar o curso primário, 5 ano, eu tive que fazer tudo de novo, eu fiz o meu ginásio, quer dizer que a minha formação não era oficial. e sempre a gente era perguntado no novo ciclo novo se eu queria continuar e eu continuei, eu quando eu tinha 18 anos eu entrei fui para o noviciado, jesuíta, e aí começou a formação e até ali nada de pensar o que eu vou ser no futuro, eu vou ser padre. Pronto! Não tinha, nenhuma outra questão, durante o noviciado, existiram alguns sonhos, algumas perspectivas. A primeira perspectiva era ser missionário entre os índios do Mato Grosso. Eu me apresentei ao provincial, eu estou pronto, eu estou disponível, em todos aqueles índios do mato grosso, eu estou disponível e ele disse quem sabe?! E depois da guerra o Japão abriu para missionários, e disse eu sou missionário, eu estou disponível, quem sabe?! (pausa/risos) quem sabe?! Eu fiz a minha, eu fiz noviciado 2 anos, 2 anos de letras clássicas, humanidades, 3 anos de filosofia aqui e durante a filosofia eu escrevia algumas histórias, eu plagiava umas coisas eu escrevia outras, e tinha um padre idoso que escrevia a historia dos jesuitas (nome) e ele tinha sessenta e poucos anos, ele estava pensando num continuador, ele dizia eu quero esse menino, ele escreve bonito, eu quero ele para ser meu continuador eu quero

ele bem formado, eu não quero ele na PUC. Eu quero ele na universidade federal, o bispo queria que a gente estudasse na PUC. Eu comecei a geografia e história na Federal e logo apareceu na minha frente outro jesuíta. E.. quando eu terminei meu bacharelado, eram 3 anos de bacharel e depois vinha a didática, em cursos separados, quando eu terminei o bacharelado (não audível) você não quer trabalhar comigo aqui na Universidade? Pois é, ele disse você quer? Eu disse, tudo bem. Eu larguei o meu orientador e fui pro outro, ele me disse assim, eu sou jesuíta você é jesuíta, não vale a pena dois jesuítas trabalharem na mesma coisa estudarem índios vivos, atuais guaranis, não vale a pena 2 jesuitas trabalharem no mesmo tema. Não tem ninguém fazendo arqueologia no Brasil. Ponto. Eu nunca tinha visto arqueologia na minha vida, não sabia o que que era, e só isso. Eu te ajudo enquanto eu posso, eu comecei a trabalhar e fui fazer estágio e curso e coisas. John (aqui no Brasil?), aqui no Brasil, eu era professor não podia sair, eu era professor na universidade federal, sem nenhum concurso, convite.

John: Mas tem outros exemplos se precisar criar suas ferramentas, próprias ferramentas.

Padre Inácio: tudo próprio. Em tudo que eu lia não tinha uma palavra sobre arqueologia na universidade, então de repente vai fazer arqueologia. Bom...!

John: Então primeira escavação, foi?

Padre Ignacio: Eu fiz duas experiências com uma francesa, que trabalhava com sambaquis, e depois trabalhou também com abrigos e pinturas, ela trouxe Joseph, era tudo cria dá Annette Laming-Emperaire, eu fiz dois períodos com ela. Em Paranaguá primeiro e depois em Antonina, um mês e um mês e meio, eu aprendi a escavar com menos com tudo isto. Bom. Depois disso, isso foi em 62 e 67, nesse tempo pobre do rambo me levou para eu ver um sítio arqueológico, 57 eu fui Tapiranga, ver um sitio tupi guarani escrever um artigo, em 58 ele me levou ao Osório, descobri a primeira cerâmica taquara, em 1959 ele me levou a Florianópolis ele era o meu patrono e lá Padre Rohr estava começando a fazer seu trabalho eu ajudei um pouco ele a escavar aquele aeroporto, primeiro trabalho de escavação que ele fez e ele tinha comprado uma coleção - era uma imensa coleção de esqueletos, de sambaquis e mais 40 mil cacos tupi-guarani, e naquele ano 59 eu fiz o meu terceiro trabalho, eu peguei aquela coleção de 40 mil cacos para saber as formas e como era as decorações. 59. E estou aprendendo arqueologia. Junto com a antropologia estava também a língua Guarani. Caiu tudo isso, eu tinha estudado dois anos de Guarani na PUC, e aí aos 58 eu fui fazer um estágio de Guarani na missão de São Inácio no Paraguai. Fui criando as minhas coisas e, em 60 eu procurei um estágio mais amplo, eu escrevi 20 e poucas cartas para universidades latinoamericanas perguntando onde eu podia fazer um estágio, eu fui criando a minha carreira e aí me responderam de córdoba na argentina doutor Alberto Reis Gonzáles era o melhor teórico que nós tínhamos aqui. Ele disse: Se você quiser, estamos organizando uma excursão com meus alunos de 03 meses no pé dos andes. Se você pagar sua estadia, você pode vir. Eu fui somando minhas experiências e por outro lado, quando eu comecei a dar aula, eu tinha um livrinho deste tamanho, eu não podia contar aos meus alunos qual era a aula (John: risos... vamos ver então, vagamente, lentamente... (risos) senão eles iam ler antes de mim e eu ia fazer o que? Eu só tinha isso e comecei a comprar livros. Eu tinha um livreiro em Munique, mandava os

catálogos e mandava... e tinha um outro livreiro em Nova Iorque. Eu criei a maior biblioteca de antropologia sul do Brasil neste tempo, eu fui criando a minha... eu fui criando tanto a parte de arqueologia, quanto a parte de antropologia também. Eu não tive professor, Padre Rambo, ensinava umas coisas muito velhas, lá da Alemanha, ele também não tinha estudado antropologia. Então a minha carreira é uma carreira de um autodidata, eu sou doutor autodidata. (John: risos). Eu fui defender a minha tese, eu escrevi a minha tese e eu não tive nenhum orientador. Eu tive que fazer as coisas por mim mesmo. Então a gente não tem aquela perfeição de quem fez o curso de doutorado ou de mestrado ou coisa assim. A formação da gente, é aquela que a gente consegue, consegui, consegui, eu li muito.

John: Mas este é um ponto perfeito para meu proximo questão, para os dois de vocês, e temos viagem intelectual do pensamento, quais são as principais questões ou temas de pesquisa, se por exemplo você vai encapsular a abordagem, do pesquisas e numa dois ou três questões mais amplos, como se pode descrever sua... (não entendível)

Padre Inácio: Quando eu fui professor e o Padre Rambo morreu logo depois que eu fui catedrático, eu fiquei pobre na universidade, eu não sei nada. E com isso eu comecei a receber dinheiro, me mandava o governo militar nesse tempo, que havia a constituição onde dizia, o IPHAN estava começando, ele tem que fazer um cadastro dos sítios arqueológicos brasileiros. E o fundador do IPHAN que era meu amigo, fim de ano me mandava um dinheiro para fazer levantamento de sítios arqueológicos. Então eu comecei assim. Percorrendo o estado e localizando com dinheirinho que a gente tinha, com proximidade que tinha, localizando sítios arqueológicos. Eu cresci nesse tempo, eu fiz isso durante cinco anos, e aí eu cresci, e fui convidado para trabalhar, fui convidado pela Universidade Católica de Goiás. Onde o reitor me deu curso percebi que em Goiás não tinha, só tinha, localizados Goiás e Tocantins, se deu o curso com a equipe que surgiu lá e na volta do avião eu pensei no projeto.

Eu pensei na minha vida. Fazer amostragem das culturas indígenas Brasileiras ponto. Teve não como um lugar, não um problema, fazer amostragem das culturas brasileiras no território nacional, então este foi o objetivo eu já tinha alguns métodos com os franceses, só que esses métodos franceses, para este projeto eles não tinham utilidade, eles são muito lentos. Você fica cavando, fazendo aquelas minúcias todas, aquela escavação, então, neste tempo eu tinha um casal americano (nomes) que ensinavam um método muito rápido, eles em 05 anos cobriram arqueologia dependendo para até o Chuí. Uma arqueologia histórico cultural, que as esculturas, história, com alguns problemas específicos dessa, aquilo me servia perfeitamente para fazer as minhas amostragens até hoje eu trabalho com isso (John: sim, sim!) Esse foi o projeto da minha vida como arqueólogo. Então algumas amostras eu gastei, a gente gastou muito tempo, 09 anos, para fazer uma boa amostra pantanal, agora aqui São José do cerrito, outra vez eram 06 anos, no começo os primeiros projetos, 01 ano, e é eram coisas assim, nada de muito específico, fazia aquela, identificar a cultura, dizer de quando, como ela está implantada, como ela se relaciona e caracterizar os elementos básicos, isso eu fiz, isso foi, o meu objetivo, continuamos fazendo isso, claro às vezes a gente faz um aprofundamento maior, como vários desses lugares, eu conheço

todos os outro métodos também, eu conheço o supermercado da teoria, mas eu sei, eu escolho aquilo, que eu consigo que eu posso fazer, então sempre que o meu limite foi cultura indígena. Eu sou jesuíta e nunca trabalhei com as missões jesuíticas, não dava, não cabia, dentro do grande projeto, então a minha vida foi nesse sentido a gente conseguiu criar amostras significativas de grande parte do brasil a amostragem. (John: Entendo... Tem o próprio caminho).

Rogge: É... desde este primeiro momento eu comecei a tomar consciência da arqueologia né, quando eu cheguei no anchietano, como bolsista de iniciação, quer dizer, o anchietano já estava constituído já desde muito tempo né, como uma instituição já respeitada, consagrada e consolidada e a pesquisa era como o Padre Inácio falou, era mais voltada a essa questão de uma arqueologia pré-histórica né, mas uma coisa interessante ali, é...(pausa) a gente fazia um pouco de tudo né, é a ideia das pessoas que estavam sendo formadas ali, é abrir bastante e trabalhar com tudo, desde a curadoria, do material que vem de campo, lavar, numerar material, as leituras, abrir a mente o acompanho, começar a fazer leituras chegar ali sem, praticamente, sem nada, aos poucos vê, até que começa então aos poucos a trabalhar em projetos que o instituto já estava trabalhando um pouco mais definidos, ela é a primeira experiência com cultura material na parte de análise é, uma coleção grande de cerâmica, você deve lembrar candelária né... era também milhares de... de... cacos, cerâmica guarani, ali foi minha primeira experiência de pegar o objeto e fazer análise de todo o processo, mas era isso, era, fazer um pouco depois, vai lidando com lítico, só nunca cheguei muito na área dos vestígios orgânicos, só nunca cheguei muito na área da... dos vestígios orgânicos né, porque essa é uma área bem especializada ali dentro do instituto, havia uma..., um laboratório como há até hoje né, mais voltado para as zooarqueologistas, tinha biólogos que trabalharam ali, mas é ... assim... acho que é criar uma experiência mais aberta, mas sempre na área da arqueologia pré-histórica (Padre Inácio: Isso era uma equipe). Era uma equipe né, sempre... sempre... no coletivo né... 2x cada um vai fazendo alguma coisa, mas no fim soma, dá o resultado final. Mais recentemente agora o Padre Inácio comentou antes, a gente entrou para essa área da arqueologia histórica, mais enfim... é... acho também não é uma mudança assim que dá pode dizer assim... ó... mudou completamente, não. É uma arqueologia da mesma forma também, só que o objeto é outro.

John: Ótimo... (pausa) falamos do desafio de fazer arqueologia né, muitos pesquisadores do Brasil eles disseram que questão de financiamento é um problema maior (não existe, maior) do país hoje. Vocês concordam com isso ou tem outros desafios mais profundos?

Padre Inácio: Deixa eu olhar para esse lado. No nosso tempo nós não precisávamos de muitas coisas, era uma coisa muito simples, muito cabocla, a gente não tinha carro próprio, a gente não parava em hotel, a gente acampava, a gente juntava as coisas mesmo em laboratório, a gente não tinha, era uma coisa muito primitiva, é... depois começaram a aparecer verba mas eu nunca deixei de fazer um trabalho por falta de verba. Porque naquele tempo o CNPq, fornecia verba para os bolsistas e tudo que você precisava, o CNPq, você fazia o projeto e eu quero uma bolsa pra mim, eu quero uma bolsa para o meu companheiro, eu quero mais cinco bolsas de aperfeiçoamento, eu quero mais sete bolsas de iniciação, eu tenho tanto dinheiro. (pausa) Uma

vez... era outro sistema, no começo nos primeiros dez anos eu recebi o dinheiro diretamente do IPHAN e vai ter um orçamento, se ele não executa esse orçamento tem que devolver o dinheiro. Chegava no fim do ano sobrava tanto dinheiro, ele fazia um cheque pra mim com um recibo para eu assinar, a conta daquele dinheiro, então sempre tinha extra durante dez anos. Véspera de Natal um cheque. Sempre tinha. E o CNPq sempre foi, muito fácil de conseguir as bolsas, eu fui bolsista 46 anos do CNPq, eu conseguia bolsa sempre na quantidade que precisava, a gente tinha bolsista de iniciação, tinha bolsa de aperfeiçoamento, no começo os meus companheiros que tinham só uma graduação recebiam bolsa de pesquisa, era um outro sistema, Havia recursos para você manter a pessoa. Os recursos para o campo, eram muito poucos porque as questões eram relativamente simples. Não era esses projetos assim... fantásticos como tem agora, com os parques, com essas barragens, aí vai uma soma incrível de dinheiro. Nós éramos pioneiros, nós éramos caboclos, éramos camponeses, contentes com muito pouca coisa, eu lembro do nosso primeiro carro, era um carro composto por peças de uns 20 carros anteriores, todo furado em cima e embaixo, mas ele nos transportava, nós íamos num caminhão, não havia muito, não havia muito investimento, era um trabalho assim pioneiro, mais ou menos como aqueles pacificadores de índios. Se mete lá no meio dos índios e vive com o que tem e sobrevivia, naquele tempo não faltava dinheiro para aquele tipo de pesquisa. Claro! No momento em que começou a arqueologia histórica, a restauração de prédios, e depois começou a arqueologia empresarial. Aí é outra questão. Claro! Porque aí são projetos grandes, que você tem que pegar o projeto e executá-lo todo, e nós fazíamos por pedacinhos e fazíamos o que podia. Então hoje nós não trabalhamos com projeto empresarial. Então pra nós nesse ano faltou dinheiro, hoje em dia eles vão pro campo, eles estão encaminhando a hospedagem que a universidade paga, e a condução, não tem com a despesa a gente não consegue ir para esses projetos grandes de arqueologia no país, nem no exterior, a gente tá se diminuiu todo, não tem pessoas e não tem as outras coisas. Mas naquela primeira etapa que vai até 1990 por aí. Que são aqueles, aquele... levantamento de sítios, aquele cadastro, aquela amostragem dos sítios brasileiros, a gente sempre tinha recursos suficientes, nenhum de nós ganhou pelo trabalho em todos trabalhamos a partir da bolsa ou a partir do emprego que tinha. Não tinha salário. Era um outro jeito de fazer arqueologia, não era profissional, era acadêmico.

Rogge: Pra complementar isso, para ter uma ideia John, hoje se fala né, contingenciamento, corte de bolsas, de iniciação, bolsas de formação de pós graduação e tal... mas eu durante toda a minha graduação a maior parte do tempo eu fiz com bolsa de iniciação científica né... e era um dos eu acho... tinha mais de 10 bolsistas naquela época, aqui no anchietano, eu pagava meu aluguel, me alimentava, sobrava um dinheirinho para a cerveja com uma bolsa de iniciação, e hoje tá R$400,00. Meu aluno hoje pode mal e mal se deslocar, de um lugar para outro com esse valor. Como a gente se depois disso né, entrando na universidade, dentro de como um... (pausa) professor... (pausa) enfim... a universidade mantém, tem um lastro que as universidades mantêm, tem um salário que eu recebo pela universidade a pesquisa é uma parte do meu trabalho na universidade, esses grandes projetos que se faziam antes né Padre Inácio, corumbá, pantanal, (...)

mas né, não invia... não inviabilizou de fato a pesquisa, a gente tá indo agora em janeiro continuar mais uma etapa de uma pesquisa sobre os acervos...

Padre Inácio: Agora a universidade paga, antes de eu parar com isso, a partir dos projetos. Eu tinha dinheiro dos projetos, eu tinha dinheiro de bolsa, então a gente não era nada luxuoso, não tinha nada de extravagante, neste trabalho pioneiro. Agora já tem salário de arqueólogo, de pesquisador, de não sei o que...já tem salários estabelecidos, no meu tempo não tinha salários, tinham salários que a gente tinha com instituição, era trabalho acadêmico.

INTERVIEW: DR. GUSTAVO POLITIS

Date: July 31, 2019

Location: The campus of Ciudad Universitaria, Buenos Aires, Argentina

John: What are your primary research concerns today?

Politis: I would say — hunter gatherers, in the past and in the present. That is my first question. In the *pampas*, in the past; in the Amazon, in the present. My first research interest would be trying to understand the cultural *other* — the cultural *other* as far away from myself. You know what I mean?

John: That's why you (focus on) hunter-gatherers, as distinct from agriculturally-based societies?

Politis: Yes, exactly. Because once you have agriculture, you start to live in cities, you're getting closer and closer to our society in the way of doing things; sedentism; urbanism; some kind of development of communication, more technology. I don't think that I do not like this — I also like this as well. But I like to understand these early stages of *homo sapiens*. When we were *homo sapiens*, not (just) hominids, but *homo sapiens* like you and me, but still living without agriculture.

With Mariana I study in the Delta Parana semi-sedentary societies — they are hunter-gatherers and small horticulturalists. I like this too, because they are showing the various stages towards this transition. But this is my limit, right? So we are seeing how these people started to become a little more sedentary, started to produce some kind of food, like maize, and I like this because, also in that case of Goya-Malabrigo, which I am studying with Mariano, it has a very rich classic

expression — vases with the heads of animals and people and hybrids, some people, some animals...that's archaeology that allows to penetrate in someway into their minds a little bit. Although we cannot fully understand their symbolic world, we can understand a little but about what they were thinking and how they were presenting nature and how they were representing some animals — so that's a big attraction to me as well. How they are understanding and representing nature.

Because I was doing a lot of archaeology in the tropical forest, and these areas are kind of tropical forests as well, there are similarities in the way of living. These hunter-gatherers, although these are more fishermen, but still they are nomadic and there are, you know, some similar animals like jaguaretê (jaguar) and monkeys in some places, so they have some connections in terms of environment.

John: So, we are touching on ethnoarchaeology, right?

Politis: Yeah, sure, because I was doing archaeology on tropical hunter-gatherers, and I was researching in the Pampas, which is grassland, this (bruxo lamarillo) which are in the Parana Delta — this environment, this kind of tropical forest in the middle of the pampas. This kind of environment is motivated by the wide body of the river, but it creates some kind of floresta in the middle of the grassland. It's like a forest in the middle of the pampas due to the specific characteristics of the Rio Parana.

John: How has your methodology regarding ethnoarchaeology changed over the 30 year time period you've been doing this kind of work?

Politis: At the very beginning I had a very intuitive methodology, then I began to develop some kind of methodology...basically the idea is trying to get systematic information about the relationship between human behavior and the material derivatives. Right? That's the basics.

John: The processual approach?

Politis: Right, the processual approach, but not only asking processual questions. Not just 'How can you butcher?' but to see the material arts and the physical acts, but as well as trying to understand if there are some patterns in the social and ideological patterns behind their actions, right? Why are some people butchering this way and these people another way? Why are some people eating animals and for others these animals are taboo? So understanding and starting to see that the configuration of the archaeological record is not related only to the material condition of life, not based *only* on a kind of energetic balance, or only people trying to adapt, or trying to improve their material conditions of living...I saw, I learned that the configuration of the

archaeological record is *entrenado* with all other factors, right? Of course, material conditions of life, energy and food are necessary for living — I am not denying that there are not motivations, but there are not the only motivations and, in many times, they are not even the *first* motivation to create some kinds of behavior.

So I started to develop a methodology where I can record the material side of that, but also, what are the other attached patterns, to see if I can find some kind of correlation. And also, not only to do this, because that would create kind of endless anecdotal information about what they consider food and what they consider not food. I tried to put this into some kind of model which would be operational for the archaeologist. One of the problems is that when you read it is very difficult to extract the information in a way that you can generate a model and test the archaeological record. I say, well, this model I generated, I contrast with this archaeological record — can this pattern of behavior project this kind of model or record, or not? So in ethnoarchaeology I think we are trying to do is to create these kinds of models that you can test with your archaeological record and see if it fits or not. The idea is to open the interpretation horizons. It's not to create a model to apply for every case, of course. It's to create several models, like many other people, like Binford or (Gold?) or whatever, for hunter-gatherers basically, right? So you can see how hunter-gatherers could produce material.

For example, let me tell you, when I started to do my research, processual archaeology was in its heyday. Cultural ecology and behavioral archaeology were growing very fast (...) there was all this growing interest in seeing patterns in energy, to finding formulas, to do it as strictly as possible. Although, of course, post-processual growing, right? Post-processualism was in its early days. I'm talking about the early 90s. '91 (was) my first visit to (...), '92 my first formal fieldwork —- I did my master's with that. But when I started to work with them I had a kind of processual mind, right?

Well say, for example, (with) optimal foraging or optimal diet [and] I started to notice that the main animals are not eaten, they are not hunted. The main animal, like the tapir and the deer, which are the bigger animals in the area, have lots of energy, sometimes easy to hunt, because if everybody is there, it's not difficult to hunt a peccary with a spear. It's no problem, you know? It's not a problem of hunting strategy or how to get a peccary. So I decided that these were not hunted or eaten because they were considered powerful spirits and have spirits. So the most important animals, in terms of calories, were not eaten (for) ideational reasons. And, for example, the peccary, which was hunted, was partially taboo. So only men can eat peccary, only men and young people. Not children and not women. And why that happened — sometimes they hunt so many peccaries that they cannot eat all the meat, the meat can become rotten after a while. And they spend two or three days eating peccary. They eat tens of kilos of peccary. Only men. What happens, you can see a differentiation between men and women — it's pure ideology.

And then you can see that you have different bone landscapes produced by societies with no food taboos, societies with partial taboos and societies with total taboos.

For example, in the Nukak scenario you would never find a (inaudible) appear and it was pressing why that would happen? And you can see the same in the past, right? You have some animals which are in the environment but are not present in the archaeological record so you can assume that, like the Nukak, the taboo animals are absent because of some ideological reasons. You will never be able to understand exactly why there is a reason, but at least you know that they are operating in another world, in another dimension. Not in a material or in an economic dimension. They are working, they are acting for the people in another dimension — social and ideological. So the idea was to record material things and all the attached social and ideological behavior related to that thing. And so I was trying to improve my methodology.

Again, I think that archaeologists should work with analogy. There is not a possibility of an interpretation without analogy in archaeology, because the things are not self-evident. You have to connect things with some kind of known human behavior. It's not this self-creation of humanity. So the best way to provide a good analogy for archaeology is ethnoarchaeology; better than any other. So we cannot — no voy forma algo de nada. We do not have the luxury of saying, 'Well, because it is difficult to connect this observation with (the) archaeological record, we will not use this'. Because then we are missing the main picture.

John: It's not going to be a perfect fit.

Politis: There will *never* be a perfect fit. Never. We never have a perfect fit, but when we are introducing more ethnographic information obtained in a systematic way, with archaeological eyes, we will be improving our fit. We never will be sure, it never will be perfect. We can always change things that, as Alison Wylie said, with good analogy we can weed out the bad hypotheses and retain the good hypotheses and remove the ones that don't make any sense in the real world, that make sense in your mind in trying to understand bones and stones.

John: Aside from a research perspective, is there a value in the preservation of various modes of society?

Politis: Yes. Basically because they want it to be that way and they have lived this way because it was a decision. It was not the case that they did not know that there was a world outside the forest. They knew that — the Nukak or the Awa — and they didn't want to be a part of that world. What happened is that their world was shrinking, right? Because people were cutting down the forest. And when they realized that one day a hunting place was a coca field. And then,

there was no forest. It was coca leaves, which have no meaning for them. We know, because we don't have coca in the forest, right?

I think that, a) It should be preserved because that's their decision, and (if) they are not preserving that, it's because they are so under the pressure of globalization that they cannot survive without interaction. Interaction is always a kind of natural thing between —- for example, they started to learn that the colonists have metal axes or machetes. And these two things are very important for them because with the machete and the metal axes they can improvise much better, to cut down the trees, and to cut, with the machete, he fruits from the palm. So they started to make some trips to the colonists' places to get the (axes). The same — metal bows are much better, are more durable, than the wooden ones. Colonization is offering something to them that it is very difficult for them not to get, but they are entering into a trap. Because the trap is that they are starting to lose independence. They are starting to depend on what the other people are doing. Before that they can do everything they need with their own hands. And they can find in the rainforest everything they need. Stones for the axes, they can make fires and fibers and blow darts — everything is there. So, they don't need anything from outside. Imagine a world where you can do, yourself, everything you need. We are doing nothing. Zero. And they were doing — I saw them doing everything.

John: Full autonomy.

Politis: Yes, doing everything except for a couple of axes. They were doing the blowpipe, the poison, the pottery, everything. Except a knife and a couple of axes. When they started to depend on these things more and more, they got trapped. It's like us with this (*picks up cellphone*). Or electricity, or so on. We are dependent. If one day we have no electricity, we are lost. Right? You are lost, you don't know what to do. So, it's the same with them. The problem is that we are living in a world that we created and, in some way, our society has adjusted to this world, partly, but we are coping with our society. But when you put them into our society they are not going to know how to cope, because there are meta-categories of behavior. So when they are entering into our society there is an interface, they cannot be pure hunter gatherers again. But they cannot be part of (our society) either. Not even the peasant society of Colombia. There is a big distance. So I have seen people who a couple of years ago that I saw twenty years ago, and they are still doing things like in the past, living in the neighborhood of San Jose del Guaviare, and they are not the same. They were much happier, much healthier, much better — I'm 100% sure — in the forest, also in isolation, but not complete isolation, but basically independent, than now, which they are on the borders of globalization. In the 'bad borders', I was say, by a society with drug dealers, guerillas, violence everywhere, sexual assault. It's not a good place to stay for any of us, as it isn't (either) for them.

So colonists for example say, ‘Why should we preserve the Nukak?’, for example. You have 1,000 people, 500 people, and they have a million hectares — in the National Park Nukak, right? Why should we give to like 500 people, 100 people… and we are talking about thousands of poor colonists here. We need more land to feed our children and our families. So in that case it’s more difficult, because these people are really poor and they are coming from poor areas of Colombia and going there to escape from poverty and from their life. At the beginning they were growing coca, after a while they became kind of farmers and ranchers. So in some ways *comerciantes* as well. So then they are making a better way of life, but based on the destruction of the rainforest of the Nukak or of the Awa. Right, with the miners as well. It is very difficult for them to explain this. But I think that the answers should be placed in the context of the respect of the *other*. Basically because we should respect the *other*.

Let’s say some people from outer space arrive and they say, ‘Well, you are all poor people. You know nothing about technology, so we will erase you from the earth, because we are better and much more developed than you.’ We would say, ‘No! Let us live our lives. Let us survive with our… we are happy with this (life).’ And the same thing happened with them. So the possibility of more technological development and better organization in some ways, does not give you the right to impose.

John: And it doesn’t mean there won’t be some sacrifices, for example, on the behalf of the colonists who also want to use the resources of the rainforest to make that preservation happen.

Politis: It’s not your resources, it’s someone else’s resources. It’s not ‘no land’ people. There are people in there! They say, ‘I was always in the forest and I never saw a Nukak’. Well, but they are hunting here, it’s a hunting place. So they are coming with a small camp, and then an area of 10 or 20 kilometers where they are hunting. So you can one camp in 10,000 hectares. Because for the colonists to occupy a place is to cut down the forest, to build a ranch and to grow something. First you need to cut down the forest because you need to put coca or maize or cacao or cattle. They do not concede that you cannot occupy or use the land without cutting the trees. It’s like a contradiction for them.

John: It’s just wilderness.

Politis: Yes, exactly. It’s simply wilderness.

John: What are some successful strategies you have seen for bringing archaeology and anthropology to the general public without being sensational or exploitative?

Politis: Well I think that . I was in a panel a couple of months ago about the communication of science and I said to the journalists that they are usually asking the wrong questions. Because we are asking archaeologists, and scientists in general, for certainties. They want you to say yes or no, and this is it. And our answers contain certainties but uncertainties as well. So this is what we know, or what we think we know, usually we have some doubts, and these we don't know. We have no idea what happened. And usually that logic does not apply to the journalists. Even to the journalists who are doing science. Because they want to say, 'This is the oldest thing.' I hate that. It's nothing. There's not a concept,'the oldest'. Among a group of sites this is one of oldest. There is not one site which is the oldest one because...this kind of...you know, the tallest man, or the shortest person. So I think that we have to train the journalists and the journalists have to train the people that archaeologists, and scientists in general, are working with hypotheses — that we know something and that we want to share it with them, but that we don't have closed answers. I think that the best we can...and, people have to take this as a good point, because (...) sometimes I have the feeling that some of the journalists are thinking that everyone is like Homer Simpson. Like a typical north american, right? Like *uuggghhh*. Some journalists, and some scientists as well, assume that *the other* is not very clever. Or they assume that they know what the other wants to hear and most of the time this is wrong. I think that we have to interact with people and let them know that there are many things to be discovered and this is a good question.

John: And it's much more interesting.

Politis: Yes, exactly. And we have some uncertainties, and this what we are doing, and this is what we are exploring, and why this and not the other...not closed. I think that this should be our main contribution in archaeology — to incorporate people into our discourse, rather than transform our discourse to be easy to understand. We are telling a story, but it has no end, and maybe (they) can help me, maybe you have an alternative interpretation. When I am in the field I talk to a lot of people and they have their own ideas and I like to hear them. I defend my ideas, of course, because they are based on what I think is right. But on the other hand, I have room for other alternative interpretations. Without saying, 'Oh, you are right! I am wrong!', you know? You know this kind of demagogic...sometimes (inaudible) only local people know the truth. I don't think so. They can be wrong. They have their own ideas. I can have my own interpretation. We will have to share everything but I am happy to listen to the other and to use it — if I can incorporate this idea in my interpretation; How can it fit with my data? This kind of thing.

John: As we move more and more of our lives into a digital space, can archaeology play a role in helping people connect to and understand their physical environment?

Politis: Yeah. But basically I am not so concerned about the materiality of the contemporary world. I'm not so concerned with that. There is a school of thought now, talking about

archaeology of the present, Hamilakis for example or Alfredo Gonzalez-Ruibal who are very concerned with the materiality of our world. I'm not against that, but it's not my main interest. Because as I told you, what I wanted to learn was about the *cultural other*. I don't want to see my own society. I mean I think I have enough information about what is around myself and about my society and I would like to see how other societies work in the past. And I still work in the present which is very simple. When I give a tour I say, well, we are here! We are not talking about the past. There are people here now, now, this moment, who are hunting monkeys with poison darts, you know? It's a few people, but still… We are not talking about the past.

And I always say, there is something that we have to learn from them. I would say one thing that I would say that I learned from them that our society lost completely is solidarity. These people are so cooperative in solidarity, helpful among each other. When some people say oh this is *le lei da selva* — , so they say that in the past or in the forest among the hunter and gatherers only the strongest survive, but it can be different. Because they have a mantra to help the weakest. You know? To be sure that everyone will get enough food every day. Everyone — the orphan, the strong one, the weak one… So how the people share their food and how the people share their knowledge and how they train everyone — it's exactly the opposite of the way that we do it. So in their society it's not individual, it's a relational society. Whereas we are more and more individualistic. We depend a lot on our technology, but in terms of psychology or our social fabric, we are completely individual. We are here eating food and twenty meters away there is a guy who lives in the street with no food at all. Because our society created these differences. These differences don't exist in these people, right? When I talk about the Nukak or the Awa with other people, I say we have a lot to learn from them.

INTERVIEW: DR. RAFAEL MILHERIA

Date: June 25, 2019

Location: The home of Dr. Milheira, Pelotas, RS, Brazil

John: Let's begin by...if you could give a general overview of the types of research questions you're attempting to answer right now, in the work you're doing, in the region...

Milheira: Do you mean the work I'm doing? In the university? An overview like this?

John: How would you explain what you do to people who aren't familiar with it?

Milheira: Well, I started in the Federal University of Pelotas as a graduate student. It was in 2000. And from there until now, it's been nineteen years since the (under)graduate course. Now I am a professor. Since 2010, I've been a professor here. So, at that moment it was the beginning of the laboratory of archaeology in the University. They were trying to start the lab and start the projects. The first project we had in this lab was a survey of the archaeology sites in the city. Of course, before we started to work, there were no archaeological sites located on a map, you know? Like really mapped. So we had to survey these sites. Nowadays we have good maps with more than 100 prehistoric archaeological sites, which means they are sites from the indigenous history. They are sites from the Pampa and especially the Patos Lagoon.So, since the beginning, I have been linked to these archaeological sites - to understand the indigenous history of the region. Ok? And when I started my master's course in the University of Sao Paulo in 2005. 2005, I believe? Yeah, 2005. The intention was just to make a good map of the Guarani sites in the Patos Lagoon. But we started to find archaeological sites and we saw that they were in difficult situations for their preservation. They are located in places where people used to go to make

barbeques, to make *lazer* (recreational activities), you know? And that's the reason we started to dig these archaeological sites. Because we had to think about preservation. I thought, well, I used to find the archaeological material on the surface of the sites and thought, man, if I just leave it here (the material), the next year it will not be here again. Then we had to dig these archaeological sites. And it grew a lot, this project. It was just the intention to make a map of the positions of the sites, but then we had a lot of information, because we had to excavate all of them, you know? The Guarani sites. And, with this, we got a lot of information to think about a model of the occupation of the Guarani groups of Patos Lagoon. So I had my dissertation about this thing, of this issue. And in the middle of the process of the masters I found these earthen mounds, which are linked to this mound-builders society from the *pampas.*

John: The cerritos.

Milheira: Yeah, the *cerritos de índios.* But at that moment, I was focused on the guaranÍ groups. The guaranÍ archaeological sites. So I just left it there as a, how can I say...sites to work (on) later.

John: You sort of earmarked it as something you wanted to come back to?

Milheira: Yeah. Because I was really focused on the guaranÍ sites.

John: Why was it so clear to you at that point that these sites were obviously from different groups?

Milheira: Yeah - we have a lot of literature about that. When we find these kinds of earthen mounds, we find a lot of material culture inside like pottery, lithics, materials and also zooarchaeological materials, remains, you know? They are absolutely different from the guaranÍ sites.

John: It's pretty clear…

Milheira: Yeah, it's pretty clear. If you read a little bit more about the differences, you are going to see that the ceramics from the guaraní sites..they are absolutely different. They have these paintings, decorations around the design of the vessel. And even the position of the sites, we call this settlement pattern, is different. Because the *cerritos*, they are linked to the wetlands, with these swamps. The groups, they (usually are) settled in this mass vegetation. And especially, around Brazil, especially in locations where we have these undulations. They didn't prefer in the beginning, these guaraní groups, these flat areas, like the margins of the Patos Lagoon. So they are absolutely different.

John: So there is a body of associations.

Milheira: Yeah - they are clearly separate. Then, in 2010, when I got the job at the University, I started to think about how to work with these earthen mounds. I was sick of working with the guaraní groups. (laughs) Sometimes that happens! I was studying the guaranÍ groups for ten years, you know, in my life. So I was a little bit sick of doing this. With the same literature… You have to rewrite and reread the same things all the time. So in 2010 I started to survey the earthen mounds and to work especially with these earthen mounds, and then there was a change in my life, because I got a job at the University. Then I got a team. I became a leader of my laboratory, you know? And I had to do something different. And the *cerritos de indios* is a question that is very important in the archaeology of this region. And since the 70s, after the thesis of *Padre Schmitz*, we didn't have any serious, systematic work. We had worked with these earthen mounds, but they were the paper from one guy, the dissertation of another, the thesis of another guy, you know? Never a systematic work, a long-term project, you know? Five, six, seven years (spent) trying to understand what it means - the Patos Lagoon. That was my intention from the beginning. And that's what I am doing right now. So, that's my work. Nowadays I work with the indigenous history of Patos Lagoon, from the guaranÍ to the earthen mound groups, trying to understand the long-term duration of this history.

John: That paints a good picture of what you're trying to accomplish. My next question would be, in terms of actually getting the work done, as a practical challenge, what would you describe as the biggest logistical challenges that you face when you're trying to answer some of these questions?

Milheira: Yeah, we have two big problems. The first of them is the money, of course. We don't have the structure we want to have. Well, I just came from England and there my supervisor has, only him, he has a project from the European Research Council, which is, if I'm not (mistaken), 2.8 million euros. Just for one guy...of course, he will make a team….

John: This is annually?

Milheira: No, it's for four years, if I'm not wrong. Four years, 2.8 million euros. To work in Colombia with these old occupations of America. These questions of 11,000 years ago or more. The occupation of America. And well, you can imagine, just one project, with one guy and five or six guys, 2.8 million euros. (pause) I don't have it! (laughs) I have nothing. Absolutely nothing today. To be honest, if you asked me nowadays, 'How much money do you have to work on your project?'. It's zero. And the prospective to have money is almost negative.

John: How many students do you have in your program?

Milheira: In the graduate program you have, nowadays, working with archaeology, I think something (like) twenty or thirty guys. You know? And in the postgraduate you have (another) twenty). We don't have more than fifty people working in archaeology in the Federal University of Pelotas nowadays. But they are working with different projects - not only with me, or in the lab where I work. They have different supervisors and orientations. They are working, for example, with slavery archaeology, historical archaeology. They are working with public archaeology, education archaeology, well, gender in archaeology. They are working with all different issues in archaeology. Sometimes we need more money. Sometimes we don't need so much money, because sometimes you can just work with papers and systematics and connections, you know? Yeah. But the money is the main problem, because we don't have the structure we want. We don't have the equipment. For example, you asked me about lidar before. Lidar is very expensive. I would love to have lidar. But you need to have more than, I don't know, one hundred thousand reais to work with this, It's absolutely impossible. And because of the lack of money, we have to collaborate with people. I have today more than 35 radio-carbon dates of the earthen mounds from here. I have paid for six, seven or eight of them...the others - just (from) collaborations. With people who do radio-carbon dating.

John: When you say collaboration - you mean you are publishing together?

Milheira: Yeah. For example, there is this lab at Federal Fluminense University in Rio de Janeiro, with Kita Macario. She is a physicist and she works with this kind of radio-carbon dating and we (decided) to make this project together. And she made twenty radio-carbons dates and we published it together, you know? Now, I just sent to The University of York, where there is a friend of mine working there - Andre Colonese, to make isotopic analyses. Isotopic analysis is very expensive to do. They have the equipment. They wanted the samples to understand the diet of the human groups on the coast of Brazil and Uruguay, for example, and I have the samples. And then we publish together. These kinds of projects are, for example, from my supervisor, they don't have to collaborate with anyone if they don't (want to). They just have the money to pay for it. They have equipment, they have cars…

John: So you have been doing this for, more or less, 20 years. Was there a period when this problem was less extreme? The lack of funds - has it fluctuated at all? Or is a problem that's basically been consistent?

Milheira: Yeah - it's consistent. We never have money. But nowadays, since five years ago I think, it's worse. And the other problem we have is about politics. Because another leg of my work, do you understand, is about the preservation of the sites. We find them. We survey. We

find. We dig. We have a lot of information, okay? We do this even without money . We can do it using collaborations. And even in England when I showed my work to these friends… I was invited to give a speech in York; for example. In the end, they were very surprised with the amount of data we have. And the amount of information we have, (considering) the amount of money we have spent, you know? I told them, 'Man, if I spent twenty thousand dollars to do all of this work…'. (They were like) 'Wooooh! How do you do it?!' We do it - you know? But the other problem is the preservation of the sites. We have all of this information and then it's heritage. Then you have to deal with the politics. You have to deal with the mayor. You have to deal with the secretaries. The people who want to just destroy everything to build beautiful houses. You understand? It's another leg of my work. I am always linked with these meetings of this kind of politics. Trying… Commissions to try and preserve the archaeological sites and it's a little bit boring…

John: I want to come back to that, the government organizations and the institutions that you need to interact with, and I want to discuss it in more detail. Let's go back to how you originally got involved in archaeology. Was there sort of an 'ah ha' moment when you realized that this is what you were going to do with your life? Like, going back to when you decided to do this.

Milheira: When I decided to be an archaeologist, well.. When I was a kid, I would have loved to be an archaeologist to work with dinosaurs. (laughs).

John: Paleontology.

Milheira: Yeah, I had no idea about the difference between paleontology and archaeology, as everybody does. And when I entered university, as an undergraduate student, I decided that I was very interested in archaeology, because there is Fabio Vergara Cerqueira, an archaeologist at the University of Pelotas. He was finishing his doctoral course at the University of Sao Paulo and he was (forming) a group of students interested in archaeology. I was there. But one day I just saw a speech from an archaeologist called Pedro Mentz Riberio - he died, I don't know, twelve years ago - and it was a really boring speech. You know? (laughs) Really, really boring speech. It was like a class with, I don't know, fifty guys, in the dark and this guys was using that machine to..(mimics using a slide projector)...do you remember that machine?

John: Yeah - to project the slides.

Milheira: It was like...Tchlack! It's a projectile point. Tchlack! It's pottery from a *guarani* group. Tchlack! It's the profile of the archaeological site...blah, blah, blah. Tchlack! I was like, 'Oh man - this is archaeology? What the fuck? You know? But, luckily, I had other experiences after that.

Because at that moment I was like 'If this is archaeology, I don't want to do it - no way.' But I had other opportunities. For example…

John: But at that point were you already in a program? Had you already chosen a degree?

Milheira: No, this was different. The degree of anthropology and archaeology in Pelotas was started in 2008. This was in 2000.

John: What were you enrolled in?

Milheira: I was studying history. *Licenciatura em Historia.* I don't know how to say this in English?

John: History was your major.

Milheira: Yeah - to be a teacher in history. Well, I had other opportunities, for example, with Adriana Dias. She's a professor from Federal University of Porto Alegre, UFRGS. It was thirty days on a field trip with her in Santo Antonio da Patrulha (in Rio Grande do Sul). It was amazing. It blew my mind, you know? Because it was thirty days working hard and really learning hard about archaeology in the field. Methodology. How to find things. When you find things; it's exciting.

John: It was a field school?

Milheira: Yeah. It was her field trip for her doctoral course. Well, from there I decided - man, that's what I want to do. It was in 2002. I went to Portugal to make a change - to study there for three months. But then, I decided. That's what I wanted to do with my life. And then I started to push myself from history to archaeology.

John: Have you maintained your relationship with her?

Milheira: With Adriana Dias? Yeah, yeah - because she's a professor at UFRGS. But she's an invited professor at the Federal University in Pelotas, in our postgraduate course. She's coming here in October. Yes, but we are always in contact. And I can put you in contact with her. She's very interesting to interview, because she's a lady and she knows everybody in archaeology, especially in Southern Brazil. And she is from the '90s, so she knows everyone. She saw a lot of the history of archaeology developing.

John: Let's go back to what you were talking about a little earlier, with the preservation of the sites. You mentioned one of the challenges was other people, who have other ideas about how the space should be used; maybe even, like you said, to have parties!
But in general, how would you describe the relationship of the general public with the topic of archaeology? Is it possible to generalize? Are people interested? They are not interested? And has that changed over the years? How would you describe the current status between the public and archaeology?

Milheira: I think for the public in Brazil, it's not only about archaeology, it's about history. Especially the official history, you know? They don't value our history. They prefer to go to Europe, to go to the United States, because *there* is history. That's how they think, you know? They are very, for example, excited for something like Stonehenge, or an earthen mound, or a cave with rock art in Europe. But they have no idea that we have these same kinds of things in South America, especially in the lowlands of South America. Like in Amapa, like in Serra da Capivara, like even the pit houses in Santa Catarina and Rio Grande do Sul. And these earthen mounds in the *pampas.* They think that, because that's what we have learned in school. That we live...that all of the indigenous groups that lived in South America were very simple, generally. You know? And in Europe...in England, France, they have a history. We don't have it. Of course, it's bullshit.
So they just don't value our history, just as they don't value our archaeology. They think that the archaeology of other peoples' is better than ours. Sometimes if we say that we need money to do it, they just say, 'For what? For doing this kind of archaeology here?' People just don't care about it. Especially because they are not linked to the indigenous history. They think that, well, after the discovery of South America, especially Brazil, there was a shift in the population. And the indigenous history is something from the past and we are the current societies - that we have to make our own history. I think that is the source of the naturalization of the heritage.

John: So where does that fit in with the preservation, the institutions, the governing bodies...because I know in Brazil, there are ***a lot*** of governing bodies and they are very complicated. So if you were to explain which you interact with the most, what their agendas are and what your experience with them has been…Could you paint a picture of how informing the public, trying to get the research done and also navigating the bureaucracy - what does that web look like?

Milheira: Well, it's very complicated. The main governing body we have is the Institution of Heritage in Brazil (IPHAN - Instituto Patrimonio Historico e Artistico Nacional). They don't have the responsibility for the legislation, but they have the responsibility for evaluating the archaeology we do here.

John: Evaluating in what sense? Whether it's being done properly or whether (the site) is important?

Milheira: Yeah - who can do it.

John: So they give the green light?

Milheira: Yes, they evaluate who can do it, the quality of the archaeology we are doing, you know? And especially they are evaluating this archaeology linked to CRM (cultural resource management), which is 99% of the archaeology in Brazil nowadays. I think less than 1% of the archaeology that we do in Brazil is academic.
I think commercial archaeology is the most important market for archaeologists, nowadays, in Brazil.

John: And (IPHAN) is the body that regulates that?
Milheira: Yes and so they are very linked to this kind of archaeology, saying what is archaeology, how you have to work, what kind of information you need to put in your reports, you know? So it's bureaucratic.

John: Is it run by archaeologists?

Milheira: Yeah, yeah, yeah.

John: So those are archaeologists making those decisions?

Milheira: It's supposed to be. (laughs) But they have IPHAN, a lot of people who are not archaeologists making these decisions. But I think, nowadays, it's better than ten years ago. Ten years ago IPHAN was weaker than today. I think nowadays they are more prepared for this work. It's good.
I think of IPHAN...sometimes people think, 'They are the enemy of the archaeologists'. I don't think like this. I think we have to improve IPHAN. We have to work with them because they are the only regulating body in Brazil. If you don't regulate the quality of the archaeology, nobody will do it. Because the owner of the company (of the private company developing a project) - this guy is not worried about the quality of the archaeology. He just wants that report can be approved by IPHAN. If the quality of the report is good or not, it's not his problem. Who wants quality, is IPHAN and us (the archaeologists). You understand? So IPHAN is the main body of the government, which regulates and promotes archaeology, because they have to do it, they want to do it and they are always promoting the value of the archaeological sites.

John: How do they do that?

Milheira: They do that by valuing some specific sites. Sometimes just by putting outdoor signs on the site. Sometimes by giving out awards for good archaeology and good archaeologists, for example the Rodrigo Melo Franco award. It's an important award they give for good archaeology and good papers, theses, dissertations, you know? And they promote it with education projects, sometimes in schools around Brazil. They try to do it. They promote with their website, where you can find a lot of information about the archaeological sites in Brazil. Sometimes they make books, sometimes they make CDs.

John: And so, from your personal standpoint, what has been your interaction with them?

Milheira: My work? Yes, my (relationship) with IPHAN has been...sometimes I need… On one hand, with this problem with the Pontal da Barra, as I told you before, we are fighting against the company who wants to build there and we want to conserve it. We want to preserve.

IPHAN is my partner. So I always report to IPHAN any modifications in the landscape they do - that this company does. So IPHAN uses their law resources, you know, to forbid the company to do things. So that's my main interaction with them.

And on the other hand, sometimes we need to...I cannot go into the field without a *portaria,* you know, it's a license from the government with my name - Rafael Guedes Milheira is allowed to work in...pa-pa-pa, you know, like this? You have to put up the *portaria* with The City of Pelotas. And there is a date for this - it will be for one year or two years. After one year or two years, I have to report to them all the work I have done and they (will) authorize again or not. And sometimes they come to the University, because sometimes the head of the lab, they come to the University for *fiscalization*. They just come to the lab to see if the collection, the archives are okay. Because I am responsible for maintaining, even physically, the collection. I am responsible for this.

John: And these are people who work for the federal government and are based in Brasilia?

Milheira: Yeah - in Brasilia is the central (office) of IPHAN, but they have structures (offices) in Porto Alegre, for example, in Floripa, in Curitiba...In all the (state) capitals, I think they have offices of IPHAN. So they come to the university and they (inspect) if the archives are okay, if they are well-managed. I have to inform them all the time.

John: And there are other government bodies that work with the indigenous groups, correct?

Milheira: Yes, FUNAI (Fundação Nacional do Índio).

John: And you have a relationship with them?

Milheira: No. Not me, no. I just work with the archaeological sites and FUNAI takes care of the living indigenous groups. So it's another regulation, another body of law, you know?

John: But do you have any interaction with the contemporary population groups?

Milheira: Not here. But in Amazonas, for example, they have a lot of archaeological sites linked to these living groups. So sometimes they have to deal with FUNAI and IPHAN. In my work, no, I have never had to do it. Yeah, but it's something that may happen.

John: In the formation of your identity as an archaeologist, would you be able to note some thinkers, or even specific texts, that have had a major impact on the way you think? Could give a list of who has had the biggest impact on your ideas?

Milheira: Yes - there are at least three or four important thinkers in archaeology. When I...I always say this to my good students...when I arrived in Sao Paulo, there was a teacher called Marisa Coutinho Afonso. She was in the jury (the entrance selection bench), you know? I was in the selection process to get a position in the masters course. And I was trying, well, my work was about the guaranÍ archaeology and I was referencing my work with old archaeologists from Brazil. And she told me, 'Man, you have a lot of literature you have to understand, you have to read, that you don't know. Starting from Brochado.' Jose Proenza Brochado - I think he was one of the most important archaeologists in Brazil. Because he could laugh at himself. Do you understand?
If you read his work in the '60s, in the '70s, you see that he was very linked to PRONAPA (Programa Nacional de Pesquisas Arqueologicas), to the old archaeology. But after that, in the '80s, he went to the United States to do his doctoral course, and could laugh at himself. Almost saying, 'Man, don't read me before '84.', because that was when he got back from the United States. So his doctoral thesis was very important for everybody in Brazil. Because he was linking, again, the archaeological sites with these indigenous groups. *(dogs barking incessantly)* The dogs are crazy. And after that, when I started to read the work of Chico Noelli (Francisco Silva Noelli)...he's a master. I think he's one of the most important archaeologists I have seen in my life. And he is alive. He is working. I am a friend of his nowadays. Just…*(pauses and listens to the dogs)* These dogs are crazy…And he made a synthesis of the archaeology and the ethnology - thinking about a new body of *guarani*

John: New body - what do you mean by that?

Milheira: Because if you read the guarani archaeology before Chico Noelli, Jose Brochado, it's going to be all about the materials - about the pottery, and about the locations of the sites. After Brochado and Chico Noelli, and other guys like Andres Soares, they could link the materials to the people. To the language, you know? To the history of these people. So it's a different kind of archaeology that we do nowadays.

John: Would it be safe to say it became more qualitative?

Milheira: Yes, absolutely, absolutely. So when I read Chico Noelli, it just blew my mind. Poof! *(mimes head exploding)* What kind of archaeology I had to understand and I had to do. Thinking about territory, about language, about relationships between *aldeias* and camps. Between *aldeias*, camps and fish camps by trails. Thinking about territory and position, you know? And specifically (regarding) Brazilian archaeologists, I think these two guys, Brochado and Noelli, maybe Andre Soares, these were the most important guys I have read in my life. And after that, Binford. Binford, I think, was *the guy* in the '60s, because he changed all the archaeology in the world. But it's more of the same - everybody is going to say that! (*laughs)*
Thinking about theory, I think it's these four guys - Brochado, Chico Noelli, Andre Soares and Binford. On different levels of course they blew my mind. They changed my mind. They changed how I see archaeology.

John: I wanted to ask a little bit about your neighboring countries here. Because you are not far from Uruguay and you're not that much further from Argentina.
Well, there are two questions; what's your working relationship like with researchers from those two countries? And, the second part of my question, are there noticeable differences in the way the research is conducted by the three countries?

Milheira: My relationship is very good with different teams in Argentina and Uruguay. When I started to work with these earthen mounds I started to read the Uruguayan archaeology. Because if we started in the '70s, with the thesis of Padre Schmitz, who worked with these earthen mounds in Brazil...they started in the '70s to really work with these earthen mounds in Uruguay. So there, they have forty years of hard work with these earthen mounds. They changed the archaeology of *cerritos*, (as well).

John: So if that national boundary didn't exist, would it make more sense to research this (the ***cerritos)*** on both sides, collectively?

Milheira: Yeah, yeah. That's the question. They have had forty years working on this, so they have good quality, the (largest) quantity of archaeology. The data about the *cerritos.* Then when I

started in 2010, with my project here, with the *cerritos*, I went to Uruguay to especially work with Camila Gianotti, Laura del Puerto and Jose Lopez Mazz, for example. They were very welcoming because they were excited that somebody in Brazil was starting, again, to do *cerritos* archaeology. Then we...of course, it's a collaboration with these guys...we have made some symposiums together, even writing together. I just published right now, a couple months ago, with Camila Gianotti, an international publishing. And (always) trying to do archaeology together. Collaborating and understanding...of course with the regional differences, the meaning of the *cerritos* in the places where we work. Well, with the Argentinians, I started to work especially with Daniel Loponte, who is an archaeologist that works with zooarchaeology. Especially after the dog - we found these teeth of a dog in Pontal da Barra and I sent (it) to him. He invited me to go there to Buenos Aires to offer a course in archaeology. And I (brought) the teeth there to analyze and they discovered that it's a domestic dog. And after that we started to think about a project about isotope analysis, but it just didn't develop. Well, we are trying, but they have the same problems we have here - money, logistics. Sometimes they have to work with (very little) money and that's it. We try to collaborate, but sometimes we cannot do it because of the money.

John: What is the nature of collaboration between the archaeologists and researchers from other departments within your university? For example, with the anthropologists?

Milheira: Yes, in the university, we do it. I have, for example, three colleagues in the university who work on my project.

John: From another perspective?

Milheira: Yeah, from another perspective. And even doing field work, on my project, from another department.

John: Do you see archaeology becoming more 'interdisciplinary' as it moves forward? Or does it have more of a 'niche' role to play?

Milheira: No, we have these connections with, for example, physicists; which we call archaeometry. Sometimes we have to work with these guys… They have to understand us and we have to understand them, because we are talking in different languages. Scientific languages - it's very hard. So sometimes, for example, we are doing geo-chemistry. It's very hard to understand what they mean about isotopes, phosphorus, calcium and the differences in the graphics… For them, it's very clear, but for us, it's very hard to understand the chemistry. But yeah, we have to do it. And with faunal remains, you have to work with the biologists.

John: And what about the other end of the spectrum? For example, the philosophical, the ontological, these types of things?

Milheira: Yes, especially, I don’t do it. But sometimes people have to work with philosophers. They have to work with anthropologists. Especially thinking about ethnology, for example. You have to understand - it’s what we call ethnoarchaeology. We have to understand the behavior of indigenous groups - in the Pantanal, for example - to understand, how they built these earthen mounds, in the Pantanal, in the past, and how they use them nowadays. And they connect these sites…. To understand how people lived in the Pampas in the past, for example. And there are questions of ethnology involved. But I, specifically, I don’t do it.

John: Your department is the archaeology/anthropology department, right?

Milheira: Yeah.

John: So what is the major distinction between the two?

Milheira: I think, a simple answer, is materiality. Anthropologists, in my department, don't do ‘material culture’. We do. They work with urban anthropology. They are working with religion. They are working with, I don’t know, food.

John: It’s more conceptual?

Milheira: Yeah, but even with food, consumption of food, the market, you know? The philosophy of science. They are doing something like this. But we work with pottery. We work with the archaeological sites. We are talking about indigenous groups, at the same time, in the same way, but we are related to the material culture and they are not. I think that’s the main difference between us.

John: Let’s just quickly touch on...you recently went to England for a yeah, right? More broadly speaking, based on that experience, was there anything you saw or experienced there that would change the way you approach your work here (in Brazil)? Besides the money?

Milheira: Yeah, besides the money, yeah. I ask myself this question every day.
Today, I think I understand a little more, how can I say, the contribution of Brazilian archaeology for the world. But it involves these questions of money, of logistics, of infrastructure. There, these ‘gringo’ archaeologists, they have the money. They are always at the point (forefront) of this analytic archaeology - the type of archaeology that I do, for example. Examining, analyzing,

using materials, using equipment, radio-carbon dating, blah-blah-blah…you know, this archaeology linked to this hard science.

John: Can we say ‘processual’ or is that too strong of a word?

Milheira: Yeah. They are the leaders of this and you will never be there. They will continue to be the leaders. I went to the University of York, for example. It was like, I don't know the building of NASA, but I think it must be similar! You have the doors with tchok-tchok-tchok-tchok (*mimics sound and mimes entering the ‘Star-Trek’ style sliding doors with a keypad).* You know, it's quite big. You should go to my lab! *(Laughs and shakes head in faux-shame).* Sorry.
So, the contribution of Brazilian archaeology should be working with people, you know? Working with indigenous groups, working with public archaeology, you know? Trying to understand the demands of social archaeology - of the people for archaeology. Because we will not be the leaders of scientific archaeology. It's not our issue. Never. So that's the biggest difference I see between our archaeology and English archaeology, especially. We are thinking about these questions of empowering people, for example, gender archaeology, black people, slavery archaeology...they just don't care of that. That's what I mean. I went to the IUPPS (International Union for Prehistoric and Protohistoric Sciences) for example, and it was about methodology, data and history made in the lab. In the field. Nothing about people.

John: It's interesting though, because the British are famously associated with the ‘post-processual’.

Milheira: But the British, post-processual archaeology was, how can I say, very...*elitista*.

John: Elitist.

Milheira: Yeah - the rhetoric of the narrative of this kind of archaeology, they could only understand themselves, you know? (*laughs)* They were opening the door for alternative archaeology, as Ian Hodder said, for example, in the 90s. But they were not *doing* this.
Do you think that Ian Hodder did indigenous archaeology? Do you think he was worried about black people in archaeology? About this difference of power in societies? They just don't care about that. It was Cambridge archaeology. He was very related to the sophistication of the narrative. I'm not sure if I can explain it better than this.

John: I think I get what you're saying. It was an isolated group and almost a philosophical discourse.

Milheria: Yeah.

John: How do you see the social role of the archaeologist, within Brazilian, within the next 10-20 years? What should the Brazilian archaeologist prioritize?

Milheira: Yeah, it's exactly this question of empowering people. We don't have to stress or focus on this academic archaeology anymore, you know? People demand results from the university. People pay for it. That's what we are dealing with, nowadays, with this government. I think the university, they thought, for the past 40 years, that the university justified itself for its own existence. No, we have to *show* our results. We have to do marketing, you know, with the products of the university.

John: Does that mean all the results need to have a monetary value? Or can they have a different type of value?

Milheira: Historical value. Philosophical value. Because, the question is, we have to *show* our work. We have to work with people, for the people. This archaeology was made in the lab, made in the field, but has an importance for the people. Not just to write papers and books and chapters, you know? And that's what we are lacking. We have a lot of money in archaeology, in Brazil, not in the academic world - it's something you have to differentiate. In the academic one (world), everything I said before, it was about the academic.

John: The 1%.

Milheira: Yeah, but that 99%, they have a lot of money. There are millions of reais, year-to-year. We don't have any idea how much money Brazilian archaeology (cultural resource archaeology) handles year-to-year, but it's in the millions. And with all of this money, what do people know about archaeology? About indigenous history in Brazil and South America? What's the impact of this archaeology, of these millions (of reais)...for the people? For the public? Nothing. Zero.
So we have to stress with this. We have to focus on this kind of social archaeology. I'm not sure, but I think it's the best path forward.