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CONFESSIONS ON A BUILDING SITE. PARALLEL STORIES OF GENDER-BASED LABOUR DURING THE FORMER "PORTUGUESE EMPIRE"

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This article looks at the daily life of women on construction sites in Portugal and the former African territories colonized by the Portuguese from a leading question: what were their expectations? How would women – usually considered unskilled labor – position themselves in scenarios described as "places of innovation and knowledge" (Valérie Nègre referring to Pamela O. Long, 2021)? Chronologically, the article spans the period from the beginning of the use of modern machinery on building sites, by the end of the constitutional monarchy in the late 1910s, to the revolution of April 1974, when the Portuguese dictatorship and its colonial rule simultaneously ended. The aim is to draw a parallel understanding of the work carried out by women on building sites by intersecting two distinct realities: the metropolis and the colonies.

1. OPENING

What were the expectations of women on construction sites in Portugal and the former African territories colonized by the Portuguese? How would these female workers – usually considered "unskilled labor" – position themselves in scenarios described as "places of innovation and knowledge" (Valérie Nègre referring to Pamela O. Long, 2021)? This article intersects two different backgrounds – the so-called "metropole" and the colonies – to grasp the daily life of women in building yards and draw a parallel understanding of their roles, struggles, and impact. While all these female laborers belonged to the same cycle of poverty, they may have had different expectations, depending on their geographical setting. Women workers in Africa had to cope with a "third fatality", beyond gender biases and poverty: they were under colonial rule. Chronologically, the article spans the period from the introduction of modern machinery on building sites, by the end of the constitutional monarchy in the late 1910s, to the revolution of April 1974, when the Portuguese dictatorship and its colonial venture simultaneously ended.

To unravel stories from building sites and their entanglements with gender-based labor issues, this article is divided into three sections: firstly, an *introduction* frames the topic from the first reflections on women's work in developing countries (formerly grouped as "third world"); secondly, the *building sites* set forward a discussion about potential approaches to the role(s) of female workers; lastly, *female builders* are questioned about their participation in vernacular building sites to Public Works. This research is based on archival material, and it will unpack two types of particularly important records: photographs of building sites, where women were portrayed alone or in groups, waiting or in action; and very scarce notes written by men concerning work optimization or labor management. The presence of women as "builders", carrying building materials (stones, sand, and earth), whitewashing houses, or supplying food and essentials to the men's teams, faded away in records over time, pointing to an increasingly "spectral" female existence.

1. GENDER-BASED LABOUR: AN INTRODUCTION

In 1970, the Danish economist Ester Boserup (1910-1999) proposed one of the first analyses – if not the first – of the division of labor between men and women in the countries then known as the "Third World" in her book *A Woman's Role in Economic Development*. The study "highlighted the long hours, tedious and heavy nature of women's domestic work in Africa and the negative impact that it could have on childcare and nutrition and women's health and well-being" – here quoting Lorain Corner's introduction in 2008.[1] More striking, however, was Boserup's observation that African women provided "more than half the total labor" in activities in the first economic sector, such as agriculture. Although this analysis did not refer specifically to the female labor force on construction sites, it placed women at the center of the economic history of countries with colonial pasts. These were not professionally qualified women but part of the masses of unqualified labor, such as those recruited for farms or domestic work.

Studies about the impact of women's labor on emerging countries' economies have helped explain their post-independence realities. Nonetheless, research on former colonial contexts remains scarce. Boserup's inquiry was not only concerned with already independent societies but also constrained by Eurocentric visions of the so-called "development", a fact that would lead to its later critical deconstruction. Convictions of gender inequality being previously "rooted in the indigenous African norms", suggesting that this condition was set before the process of colonization, have thus been strongly contested, as confirmed by recent studies in African academic circles, such as the analyses of Mohammed Xolile Ntshangase and Tlhakodisho Joel Matabane.[2]

The debate opened by Boserup in the field of gender and development studies can be fruitfully crossed with the history of women in construction, or, as this paper proposes, with speculative narratives arising from the construction yards. Following the "confessions on a building site", the paper will draw a parallel study between the realities that Portuguese and African women experienced in identical (and overlapped) socio-political settings – that is, under a dictatorship (the former) and a totalitarian and colonial state (the latter). These women lived in different cultural and geographical contexts, but both dealt with economic and gender subalternity. The latter were also under a colonizing setting and thus subjected to racial segregation.

The impact of colonialism on gender inequality has been lately questioned by scholars. Were these inequalities mainly an outcome of the lack of understanding and indifference shown by the colonial system towards the role played by African women in pre-colonial societies? (fig. 1) In 2018, Boris Bertolt searched this impact on contemporary post-colonial societies,[3] while Olajumoke Yacob-Haliso and Toyin Falola (1953) pondered "the emancipation of the African woman from the colonial gaze" in their introduction to *The Palgrave Handbook of African Women's Studies*, published in 2021.[4] Processes of westernization of gender roles had already altered social

balances, as Fautin T. Kalabamu (b. 19??) described in 2001, pointing to the end of the "complementarity and sharing of responsibilities" that characterized pre-colonial society and the increase in women's workload due to men's long absences during colonial rule.[5] Following Boserup's arguments, the hypothesis that gender inequality predated the colonization processes was in line with the reasoning of the Portuguese colonial administration itself, which had declared since the 19th century that African women were "victims" of African men.[6]

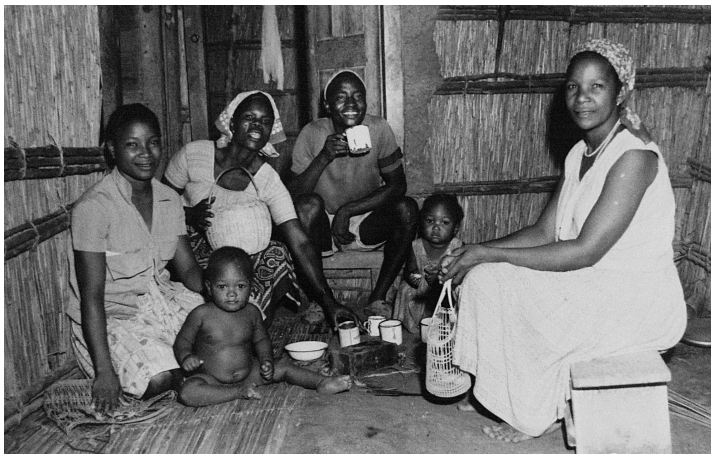

Fig. 1: "Habitat in the suburbs of Quelimane: a positive case of the formation of multiracial societies," Mário de Oliveira, Mozambique (Source: Mário de Oliveira's archive).

Evidence of such a line of thought could be found in official documents that discussed strategies to increase the profitability of labor and teams in the Public Works of the Portuguese colonies at the turn of the 20th century. Women appeared on payment scales next to minors and children, thus being placed in a position that reinforced their subordination, also evident in the disparity in salaries.[7] Along the same lines, women were considered physiologically and intellectually incapable of carrying out "equal" tasks, including those that involved physical effort.

This perception of African women as allegedly powerless agents was also fostered by the colonial authorities when addressing the power relations between genders within the so-called "indigenous" communities. According to the "Indigenous Statute" in former Portuguese Guinea, Angola, and Mozambique between 1954 and 1961, targeted at communities resistant to westernization, only in the absence of the (male) leader or his minority could "women (...) be invested in the position of village chief."[8] In Portugal, an equivalent disparity could be glimpsed in the rules that articulated access to the vote and inhibited its exercise for unmarried, illiterate women on low incomes,[9] a group made up of cheap labor, possibly available for construction work.

Considering these circumstances, the following sections focus on the expectations that might have guided these women as active participants on the building sites, while identifying some of their tasks and objectives. The persistent questioning of the female "biological nature" was measured concerning the male referential – both from the colonial perspective, an aspect strongly criticized by Bertolt; but also from the metropolitan perspective, where a similar physiological interpretation endured. This perception would place women who lived through most of the 20th century until the 1974 Revolution into essentially "caring" roles. Such a profile may have been echoed in the design of domestic spaces (more implied with the female sphere); some persuasive capacity in conditioning male workers involved in mass labor; or even in aesthetic decisions, resources, and building materials. All these situations are yet to be proven.

2. BUILDING SITES

Building sites have become highly complex structures organized according to the modern division of labor since the 19th century. These places gradually incorporated machinery while mobilizing an unskilled workforce that stood out for its large numbers. Unskilled workers represented the lowest level of a hierarchical structure dictated by upward movements towards "professional" qualifications or expertise. Pamela O. Long (b. 1943)'s studies were key to exploring these places as favorable environments for communication, thus constituting "trading zones", but this viewpoint has given way to interpretations that are less confident in such Western progressive rationalism. The North American historian had identified these dynamics in earlier historical periods, describing the "process of information transfer" concerning craft and artistic practices in 16th-century Rome.[10] O. Long's analysis suggested reciprocity in the transmission process: "What are the conditions under which occupational fluidity and the development of trading zones could occur?". Her arguments, however, were mainly related to "skilled practices" – a competence that was hardly recognized at the time for women recruited for construction activities, whether in the metropolitan territories or colonial regions. Further questioning construction yards, Valérie Nègre (b. 1960) emphasized that these places were critical settings for solving practical problems arising from the obstacles that the work offered daily. In her research into the dome of the Hale au Blé (Paris, 1782-1783), the French historian found no evidence of the symbiosis effect proposed by O. Long. According to Négre's research, the architects were the only agents who seemed to benefit from the solutions trailed by the craftsmen, leading her to conclude that the idea of a "trading zone" was inapplicable to this specific case.[11]

This debate is paramount to enquiring and setting the presence of women on the modern construction sites promoted by the Portuguese, particularly along the lines considered by Christoph Rauhut. Rauhut described the building yards as a "highly complex cosmos"[12] and drew attention to the coexistence of a multitude of

agents with different tasks and systems. Women were one of the countless actors involved with the building site and thus also experienced overlaps and intersections between "old practical" technologies and technological innovations.[13] (fig. 2) In this context, was the construction site a "trading zone" where women could transfer knowledge? Or would it be more conducive to think about the coexistence of different practices and processes? Which scenario would be best to measure and assess its impact?

Fig. 2: "Praia's airfield hangar, paving works and earthworks," Santiago, Cape Verde, 1956-57 (Source: Arquivo Histórico de Cabo Verde [Cape Verde's Historical Archive]).

Rauhut has sought a better understanding of women's role as active agents in the building process by applying the concept of *Non-Simultaneity*, borrowed from Ernest Bloch (1880-1959, to the construction site.[14] From this theory, Nègre's analysis put forward two noteworthy arguments. On the one hand, "the vernacular processes co-existed with the new", a condition to which female laborers were undoubtedly exposed, not least because they were bearers of local knowledge, despite not being recognized as "skilled" labor. On the other hand, "time [acted] as a parameter for differentiation", opening the building site to a diversity of "external" interferences, such as the origin of materials, the evolution of means of transport, the repercussions of legislation and standards, etc.[15]

In a colonial context, particularly, these questions were expanded and further complicated by racial issues. Beyond gender, what new conflicts arose from the different ethnicities? In the Portuguese setting, former prisoners and convicts of "white" ethnicity occupied the most qualified positions on the Colonial Public Works sites, as they were considered suitable for more demanding jobs. This situation was clearly stated in administrative documentation, such as the Report of the Directorate of Public Works of Angola, 1900-1901, written by engineer José Joaquim Peres (?-?). Different professional levels were mapped out by taking the so-called "indigenous workers" as the lowest standard. Workers in this "category" were not allowed to go beyond the jobs of carpenter, bricklayer, or blacksmith – and always carried out under the supervision of "white laborers". The "servants" would also be "recruited from among the indigenous people",[16] thus forming a huge mass of unskilled workers.

Within the framework described by Peres in Angola, where were female workers? Very tellingly, women were identified in payment rolls by their gender and were not divided into categories of functions or tasks (like men). This example challenges some recent studies that identified specific and relatively autonomous roles for women on construction sites, especially as "carriers", as Madhavi Jha proposed in the context of the history of construction in eighteenth-century colonial India.[17] In the Portuguese colonial context, as far as documents reveal, women played multiple roles, from field assistants to meal preparers, or carriers of materials such as stones and earth.

Also in Portugal, women could be early spotted in the construction of infrastructures. From the first decades of the 20th century, female participation in technologically advanced works, such as those involving the use of reinforced concrete, was reported. For instance, "nine robust women, in addition to the carpenters and ironworkers", were part of the team building the Luiz Bandeira bridge (Road no. 333-3 over the River Vouga, 1909) in the north of the country, photographed for the magazine *Le béton armé*.[18] (fig. 3) This note made clear the existence of female workers, even if their description was "strange" to outsiders.[19]

Fig. 3: "Concrete workers on the Luiz Bandeira Bridge over the Vouga," Portugal, 1909 (Source: IFA/CAA).

The *strangeness* was triggered by the physical "robustness" of these women, who carried out "heavy" construction tasks. In today's lens, this view does not seem to be in line with the stereotypes of women at the end of the monarchy. Were these "sturdy-looking women with solemn, concentrated expressions on their faces" from poor communities – as described by André Tavares, who explained the context of the publication of this article in the magazine – considered through the same gender *clichés* at the dawn of the First Republic in Portugal, in 1910? Or were they pondered mostly as providers, further complexifying the potential stories produced by these construction sites?

Nearly four decades later, photographs taken during the construction of the Ofir tourist complex in Esposende, northern Portugal, showed the same determination on the faces of the women on the building site.[20] (fig. 4) This group of women worked on the completion of the project designed by the Portuguese architect Alfredo de Magalhães (1919-1988). The complex consisted of a hotel and several single-family houses and was intended as a holiday resort for Porto's elite. These female laborers accompanied the male members of their extended families (fathers, uncles, husbands, and/or sons, who mostly came from neighboring villages). They provided food and helped with what was described as "unskilled building tasks", such as the transport of materials or preparation of mortar. Recruited within the family collective, women saw these seasonal and occasional jobs as a way of increasing their economic income, competing with the men in the role of providers, a condition they exercised as a "usual practice".

Construction activities were no stranger to them. The "peasant women" were often involved in building and maintaining their housing structures. From 1955 onwards, Portuguese architects themselves had come across these same female builders during the survey of regional architecture.[21] (fig. 4) They whitewashed their houses and carried water and earth for making adobes or mortar. However, they were pictured by the survey's promoters as secondary actors, acting to their eyes mostly as field assistants. Women were not expected to provide answers that could challenge the growing protagonism of modern architecture and help to secure locally rooted building alternatives.

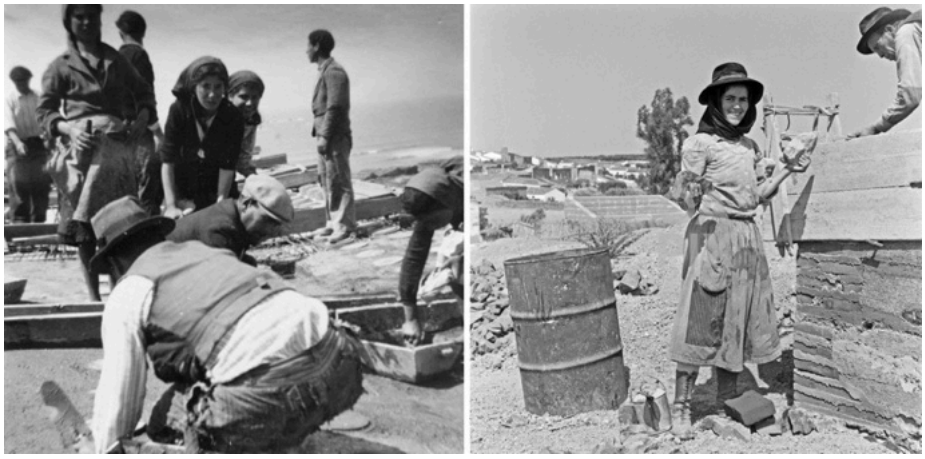

Fig. 4: "Women the building site of the Ofir tourist resort," designed by the Portuguese architect Alfredo de Magalhães, Portugal, 1946; Woman building rammed earth walls, 1955-1961 (Source: Courtesy of Tiago Bragança; *Arquitectura Popular em Portugal*, Zone 5).

On the building sites – often the result of the design of these architects –, what type of knowledge would women transfer from their own praxis and what would they acquire? And to what extent? The women of Ofir combined artisanal techniques with the use of concrete, which was considered an innovative technology in Portugal in contrast to traditional local building systems. Even if the training of the different workers was

often requested by the foremen and senior technicians as a way of speeding up the work on the building sites,[22] it is not likely that female workers were trained. To carry out construction tasks, they would rely on their own experience and on repeating what they saw in the building yard. Once back in their communities, it is also not clear whether they reproduced the construction systems and technologies they had been exposed to in their buildings. Nonetheless, the final success of the building task was always dependent on their ability to adapt to the contingencies of the site, following Nègre's insight.[23]

3. FEMALE BUILDERS

During the 1960s, the Portuguese geographer Orlando Ribeiro (1911-1997) carried out study missions to Angola. In his field notebooks, there were a few comments concerning the gender division of labor. Of these notes, only one referred directly to women's participation in construction activities: "The man frames the wooden cubicle and puts on the roof; the woman cuts grass".[24] Ribeiro was describing the construction of a traditional house in the Lubango region that used a wooden structure covered with plant material. He was not very helpful in his explanations, only adding that in some places people build with "brick and cement" instead of "authorized adobe". This comment exposed one of the aspects of the "modernization" imposed by the colonial administration, which had an impact on changing the building systems practiced locally.[25] Ribeiro's interest in the structure of the traditional African house went back to the studies he had carried out in former Portuguese Guinea in the aftermath of the Second World War, which also resulted in the collection of "indigenous" buildings and construction systems. Sketches of building plans and sections were collected in identical notebooks, also without any reference to the collaboration of women.[26]

Despite the scarce remarks, women were undoubtedly active agents in construction. The anthropologist Jorge Dias (1907-1973), together with his wife Margot Schmidt (1908-2001), had already stated the essentials of the gender division of labor concerning the construction of a traditional dwelling in Mozambique. (fig. 5) Dias and Schmidt mentioned the sharing of tasks and, therefore, responsibilities (as the African historian F. Kalabamu would later summarize): "Each man must know how to build his house, and where clay wall is traditionally used, the woman is the one who does it"[27]. Besides, other more systematic ethnographic surveys carried out during the colonial period revealed the presence of this female "builder".

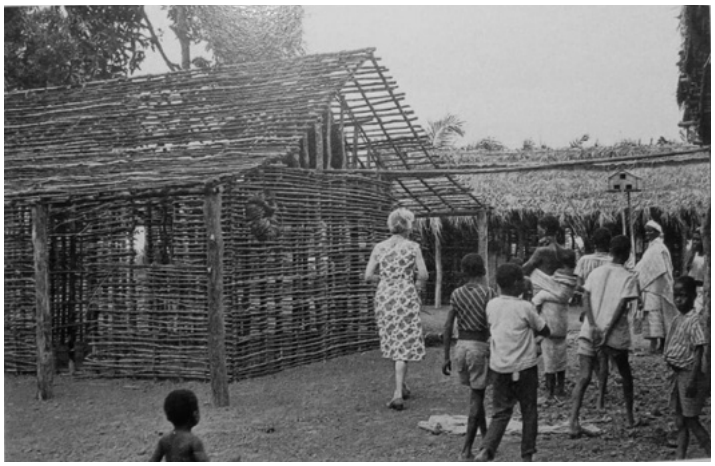

Fig. 5: "Margot Schmidt Dias in a sanzala (village) in the Ambrizete region," Angola, 1960 (Source: Orlando Ribeiro, *Cadernos de Campo*, Angola, 1960-69 [photo 8139]).

Following Ribeiro's visit to Guinea, the Centre for Portuguese Guinea Studies promoted a survey of the so-called "indigenous housing". This study was carried out by Avelino Teixeira da Mota (1920-1982), 2nd lieutenant of the navy, and Mário Garcez Ventim (?-?), a civil engineer. Fourteen officials from the colonial administration, representing an equal number of ethnic groups, gathered data to describe multiple scales and topics: the house (construction and type), the dwelling (*morança*), the settlement, and the religion.[28] Plenty of ethnic groups used women as labor for construction: the Brames, Manjacos, Beafadas, Nalus, Mandingas and Papéis.[29] The survey resulted in a constellation of both specific and generic roles, also considering the integration of these women into family teams. Among the women builders, the *napagete* brame or "floor beater" was responsible for compacting the earth that made up the floor "inside the hut after the house was made so that it acquired consistency".[30] The women from the Manjaco[31] and Mandinga[32] groups were in charge of transporting materials, including water, and kneading the mud that made up the walls. The Papel and Nalu men relied on the help of the extended family[33] and distributed the work "according to their strength and gender".[34]

This presentation of the "Guinean female builders" also aims to question the role of African women on vernacular building sites in pre-colonial societies. The idea of a "female builder" seemed to involve very specific tasks, close to those carried out by Portuguese women within their communities and on private building sites. Likely, the descriptions were previously filtered through the eyes of the administrators, who were men calibrated by the "Western patriarchy". Against this backdrop, the publication promoted by Mota and Ventim represented a step forward in the awareness of women's contribution, when compared to previous essays. In the first anthropological study in Guinea, for example, carried out in the previous decade by Landerset Simões (?-?), the role of women in construction was only noted in the "decorative arts", through the execution of mural paintings inside the "palhotas" of the Bijagós islands.[35]

Unraveling the role of these women in traditional construction makes it possible to get closer to their behavior in Colonial Public Works construction teams. However, some of these materials are still puzzling due to the lack of supporting notes, such as in the case of the photographic records of the construction of the road to the Três Pontas Lighthouse in Cabinda (Angola, 1936-1941).[36] (fig. 6) These women were most likely working under Article 20 of the Colonial Act, which dictated that the "State [could] only compel indigenous people to work on public works of general interest to the community".[37] This was a labor system that in many cases took on a compulsory dimension, and its imposition was tolerated by the colonial society because it was considered to be for the benefit of the workers themselves.

Fig. 6: "Farol das Três Pontas. Road works," Angola, Hydrographic Mission, 1936-41 (Source: IICT).

In other geographies, however, this "forced" aspect glimpsed a strategy of survival. In the report *No Arquipélago da Sede e da Fome* [In the Archipelago of Thirst and Hunger] by the colonial inspector António de Almeida (?-?),[38] ten photographs of Cape Verdean women performing "male functions" (as assumed by the colonial administration) portrayed genuine "providers" in the role of construction workers at the service of local Public Works. (fig. 7) In a territory where adult men were emigrating in the face of widespread poverty and lack of employment, the women took on the task of building the basic infrastructures. They collaborated in the construction of roads and equipment for near-subsistence farming, repaired walls and urban streets, and transported stones from the quarries and water to the building sites. According to Almeida, they were overburdened "[with work that] fatigued, wore them out and killed them".[39] Ten years later, images of the construction of the aerodromes in the cities of Praia and Mindelo, in Cabo Verde, revealed building yards that could be described as a simultaneity of "non-simultaneities": machinists operating steamrollers and soil stabilizers, welded steel mesh makers working with the concrete for the runway, bricklayers, and women carrying water and sand. An orderly and perfectly orchestrated crowd.

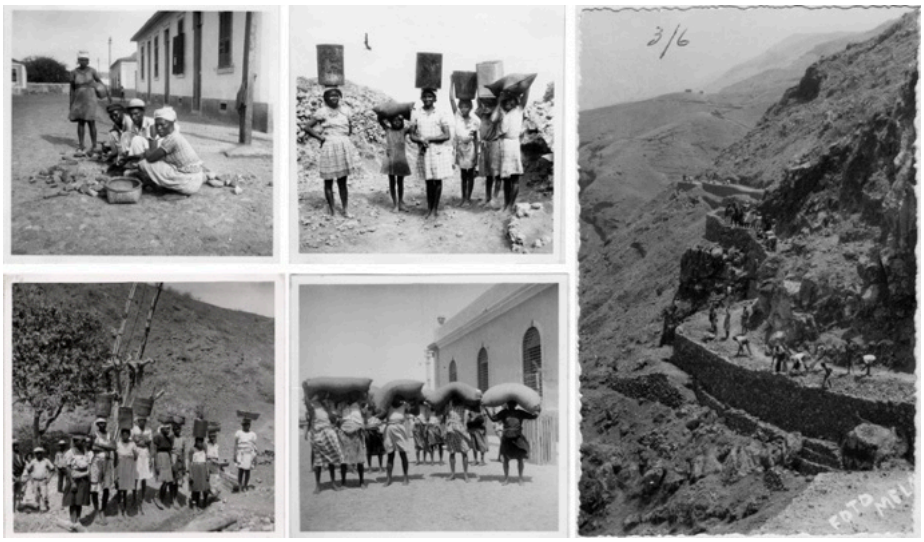

Fig. 7: Women workers, Cape Verde, 1948 (Source: António de Almeida, No Arquipélago da Sede e da Fome. Report by the Senior Inspector, Inspection Mission to Cape Verde 3 (1948). AHU, A2.01.02.009/00045).

3. FINAL CONSIDERATIONS

After discerning the advantages of using the simultaneity of "non-simultaneities" to describe the construction site, Rauhut emphasized that this is a "perspective that helps us to avoid" the "trap" of confronting the building processes by repeating the lines set by the "ideology of progress" that guided the previous studies, thus proposing to break down a barrier.[40] Undeniably, acknowledging the presence of women on the building site requires a lens of analysis beyond the culture of "modernization", otherwise these female workers will remain secondary actors – or even invisible.

Finally, there are significant dangers and pitfalls in proposing narratives that bring self-determined nations and colonized regions together, due to their different constraints and challenges. However, the cases of Portugal and its formerly colonized territories offer remarkable ground to intersect the common condition of women's subalternity under a dictatorship, especially those of low economic status. The use of similar management models and construction systems across the main Public Works in these territories, under a single "empire", further reinforced the importance of these entanglements. The women involved in construction sites, both in the metropole and colonies, brought their own experience from vernacular construction sites. This knowledge progressively fascinated technicians, architects, and ethnologists, but it did not escape from an "archaic" condition. In some way, female laborers were all *carriers* of the knowledge celebrated by Bernard Rudofsky (1905-1988)[41] when he announced the existence of a "non-pedigreed architecture". The Portuguese case thus reinforces several questions concerning women laborers: they were

an active part of the primary economies of their communities, as Ester Boserup explained; they shared tasks and responsibilities in construction within their communities, as Fautin T. Kalabamu emphasized; they performed specific "gendered" tasks of local cultures, such as the Guinean *napagetes* or "floor beaters"; and they stopped "carrying" to become "carriers" in Madhavi Jha's view. (fig. 8) All these perspectives are key for historiography to study women in the construction yards beyond their gender status. Let's continue listening to the "confessions" echoing from these building sites.

Fig. 8: Women in the building site of the Ofir tourist resort, Portugal, 1946; Malagueta Mountain. Girls carrying stone for the construction of walls, Cape Verde, 1948 (Source: Courtesy of Tiago Bragança; Almeida, "No Arquipélago," AHU, A2.01.02.009/00045).

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[33] Francisco Artur Mendes, District Administrator (Bissau), "Papéis' dwellings" *in* Mota and Ventim, *A Habitação indígena*, p. 327.

[34] Jaime Coutinho Fernandes, District Administrator (Bissau), "Nalus' dwellings" *in* Mota and Ventim, *A Habitação indígena*, p. 440.

[35] Landerset Simões. *Babel negra etnografia, arte e cultura dos indígenas da Guiné*. Porto: Oficinas Gráficas de O Comércio do Porto (1935).

[36] "Álbum fotográfico [photo album] nº19," *Missão Hidrográfica de Angola [Angola Hydrographic Mission]*, 1936-1941, vol.1. Instituto de Investigação Científica Tropical [27666].

[37] Republication of the Colonial Act (1930), Decree-Law 22.465 of 11.04.1933.

[38] António de Almeida, "No Arquipélago da Sede e da Fome," Report of the Higher Inspector, Inspection Mission to Cape Verde, 3 (1948) [AHU, A2.01.02.009/00045].

[39] Almeida, "No Arquipélago", p. 101.

[40] Heine and Rauhut. *Producing Non-Simultaneity*, p. 33.

[41] See *Lessons from Bernard Rudofsky: Life as a Voyage*, Birkhäuser (2007), particularly a selection of articles from the magazine *Domus*; Bernard Rudofsky. *Architecture without architects: an introduction to non-pedigreed architecture*, The Museum of Modern Art: Distributed by Doubleday, Garden City, NY, 2001.