A case study of Heritage: Living Tradition

Mount Athos and its Built environment

a Research Thesis by Konstantinos Doukas

Supervisor: Ivan Nevzgodin

TU Delft Faculty of Architecture & the Built Environment

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I.   Introduction

"Time in its irresistible and ceaseless flow carries along on its flood all created things, and drowns them in the depths of obscurity, no matter if they be quite unworthy of mention, or most noteworthy and important, and thus, as the tragedian says, "he brings from the darkness all things to the birth, and all things born envelops in the night.""

Anna Comnena, The Alexiad[1]

Architecture is the primary source of every archaeological research on tangible and even intangible heritage and us such its preservation is of utmost importance for the benefit of the future generations as a whole. Though, even after a well thorough restoration project of a monument is completed the question of whether the final image is true to its historical use and significance is still present; the monument most probably will not have the original use or the indigenous people that used to live beside it. Although this is acceptable and a logical outcome of the tempest of time and the events that lead to the monuments' current form it is also important for both architects and historians to identify places in earth that are true paradigms of living tradition, and through researching and analyzing them may their concepts of harmonic and sustainable pre-industrial way of living be a source of inspiration.

I took interest in the correlation between tradition and sustainability after experiencing myself firsthand through fieldwork of architectural mapping and surveying of such traditional "grey" monuments. The term "grey" is the obscurity that old workshops and other buildings have fallen under, constructs in disrepair that are not yet listed and are not under the eye of major Heritage preservation organizations. Those buildings, palimpsests of countless repair markings on their walls are reminiscent of a time that man was more resilient and far away from our modern hyper-consumerist attitude. Signs of a circular economy, "reuse and repair" were fundamental for their survivability of their professions and lives.

There are, though, semi-closed societies that chose to live in long-established and predetermined standards of living. Those communities are mostly driven either by religious belief or are dedicated to their social heritage. For my work I will study an example of the former indicator. An area that for over a millennium is home to various monastic-communities. Mount Athos, a mountain and easternmost finger of the Halkidiki peninsula, it is an autonomous region of Greece. A place of twenty monasteries and countless subsidiary establishments, some dating continuous use since the 9th century AD (Kadas , 1980). Known in the Orthodox Christian world as "Holy Mountain" were women and young children are not allowed, is under an idiorhythmic religious status, were a council of 20 monks -one from each monastery- partake in the important decision making (Provatakis T. M., 1986, pp. 29-30). Mount Athos as a whole is listed as a World Heritage Site by UNESCO since 1988, with two of the criteria referencing the mountain being a vanguard at preserving vernacular architecture and the precious flora of the region (ICOMOS, 1988). As of the 2011 census

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[1] Part of the preface of "The Alexiad", a historical work of the Byzantine princess Anna Comnena in circa 1148 AD (Comnena, A. ca. 1148/ 2000, p. 2)

the de facto population of the peninsula is 2.072[2], with the striking majority being the monks, while other male workers live there non permanently, making up the workforce needed for the labor that monks cannot do, mainly building conservation and construction.

Even though those monastic communities have a religious purpose, we can study both the many traditions in the monks' everyday life and the palimpsest of their building environment that can translate to a sustainable way of life. First and foremost, there is a need to outline that even though the modernity reached the peninsula the monks chose carefully what to and not to adapt in their communities. Yet this is not always as visible, mostly regarding the interior architecture, as someone would have expected. Continuing their strict religious lifestyle, they integrated technological advancements mainly in their production sector (olive mills etc.) and electric lighting in some of the monasteries. Paradigm of this architectural continuation without externally visible technological interference are old early-to-mid 18th century illustrations (Figure 1) compared to present day photographs of the same building complexes (Figure 2).
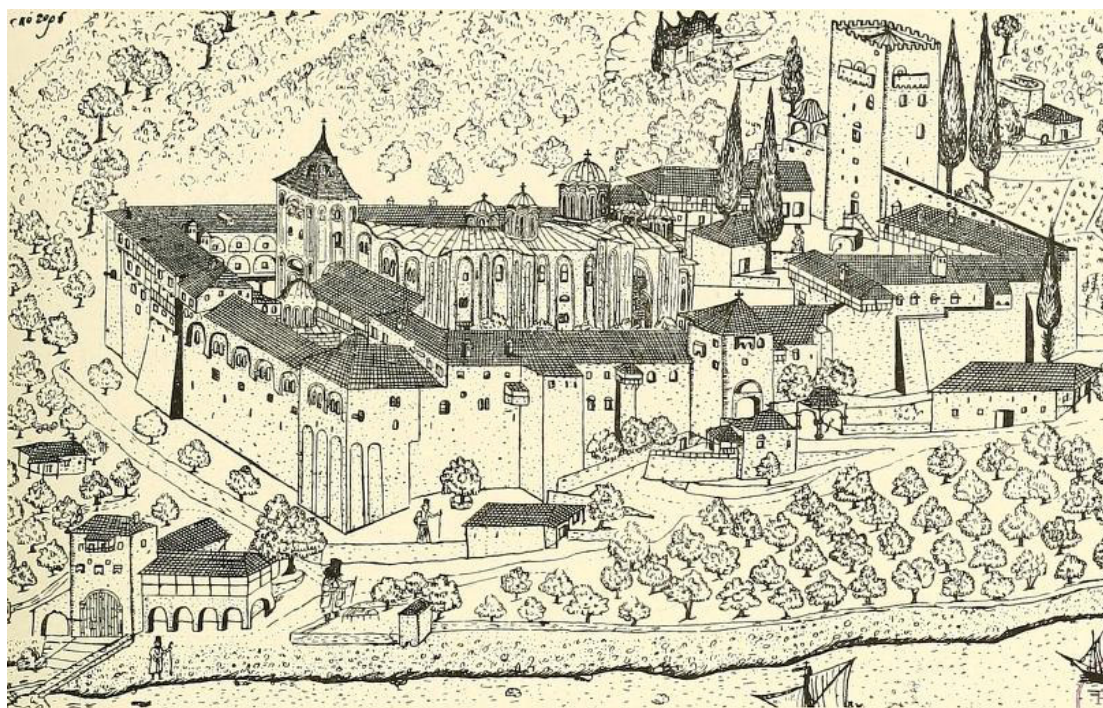

Figure 1: Dochiariou Monastery in Mount Athos, drawing of Vasily Barsky (Barsky, 2010)

Figure 2: Dochiariou Monastery in Mount Athos, early 2000's, (unknown)[3]

Those Monasteries present an intriguing array of architectural elements, from Byzantine Imperial architecture -being also the oldest buildings- to structures of vernacular architecture; mainly the various workshops, other exomonastic[4] buildings and isolated monks' cells. As such, the purpose of this paper is to investigate the resilience and sustainability of the monastic societies and their architecture through a historical comparison between two time periods, late 16th to early 18th century and 1950 till today. Those periods are not chosen randomly, rather, they are the two poles of the mountain's history. The first period being the time that the monasteries were heavily taxed from the then Ottoman Empire while also travelers needed direct permission to visit from Constantinople (modern day Istanbul). The latter period is the well-known post-war modernity, the globalization of markets and the ease of accessibility and mobility throughout most of the world. This juxtaposition will give insights both on whether a sustainable way of living is possible in modern times and how those monasteries survived and the architecture they produced during the hardest of times.

In order for the aforementioned comparison to be most fruitful and give valid conclusions, a well-constructed methodology is needed. I deducted that the best route for my analysis is through a thorough examination of literature from both Greek, Western and Turkic origins. This will provide the reader with a full spectrum of information regarding the history of the exomonastic architecture; the main focus of

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[3] (Unknown) Retrieved from: https://athosweblog.com/2008/09/23/570-vasily-barsky/

[4] Exomonastic: From Greek έξω (éxō, "outer; external") + μοναστικός (monastic, "Of or relating to monasteries or monks")

the study. Alongside the literature sources, a syncretic analysis of various illustrations of the buildings and life of the monks throughout the long history of the Mountain's monastic communes will give evidence of the architecture's progress or stalemate status. Thus, the formula of this thesis paper will start with a historical contextualization of the peninsula's Monasteries and move to a lifestyle and architectural comparison between the two main historic periods that were mentioned earlier.

II.   Historic overview, perpetual challenges.

This first chapter's purpose is not that of a simple historic review similar to those in the numerous guidebooks, rather, for the objective of my research work, it will be a syncretic review of various historic sources in order to understand how both the lifestyle and architectural landscape came to be. Identifying which were the challenges that the monastic communities faced throughout their millennia long history, and which of them were always recurring or are bound to happen in the future.

A**. Geographical and Historical Introduction**

An important aspect of every historic urban development or other primary human activity is that of the topography. In our case the Athonite peninsula starts as an isthmus from the greater Chalkidiki peninsula in the coastal part of Macedonia region and continuous as a narrow strip of land for almost 60 km, while the width varies between 8 and 12 kilometers. The whole peninsula has a mountainous terrain with many hard-to-reach peaks of 500m and above, while the highest peak, Mount Athos itself, that gave its name to the rest of the peninsula, reaches 2.033 meters above sea level (Provatakis T. , 1983). In a contrast to the mountainous physiology of the place, the terrain is fertile with subterranean water resources and the climate Mediterranean with flora covering all of its mountains, while parts of the hills that cover the sub-peninsula are rich in slate and white marble. This would be the place of the still existing 20 monasteries and their numerous subsidiary establishments.

It is regarded that monastic communities had already established themselves in Mount Athos far before the 10th century, most likely in ephemeral wooden structures (Provatakis T. , 1983, pp. 12-13), although the special status of the peninsula does not allow cohesive archaeological excavations. Even though the first official written accounts of the existence of monastic communities are from the year 843 (Hellier, 1997, p. 95), the lack of research documentation and literature of pre-mid-10th century knowledge of the place that otherwise would have been important for the archaeological and architecture community, as well as my own analysis, I will not dwell further into academic obscurity. On the contrary, I will start from mid-10th century, specifically from the first *Typikon*, an equivalent to modern articles of association, which was signed by the Byzantine emperor Jhon Tzimiskes alongside 56 monks in 971 or 972 (Provatakis T. M., 1986, p. 27), and was the first set of rules that

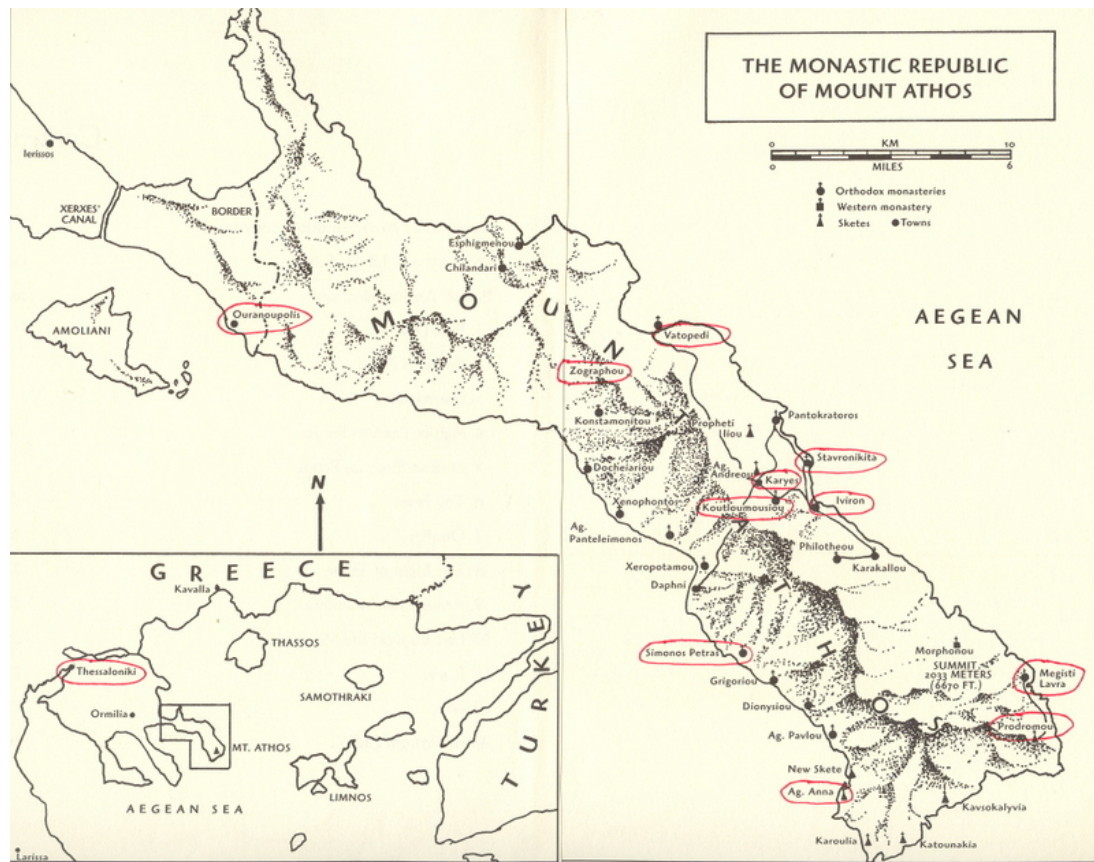set the Athonite peninsula to remain a place of Hesychasm[5] and monastic life for the many centuries to come.

Figure 3: A map of Mt. Athos peninsula and the supposed location of Xerxes' Canal[6]

The first monasteries, more specifically, the main building of every Abrahamic religion, the temple, also referred to as *Katholikon* in literature, that are still standing were also built in the mid-10th century (Hatzifotis, 1995, p. 39). From there, the monks built their living spaces around those temples, but both the attraction of many people in the monastic way of life of the period, the Imperial donations and the need for protection complexes made of stone in the form of castles took their place. Most of those complexes follow the same rules; enclosing as if protecting the main temple (Orlandos, 1999) as enemy raids were common throughout their early history, yet it adds to the introverted ways and tradition of their belief. Comparisons can be made with ancient Greek housing types, were again the dwelling creates a small atrium in the middle and the lack of exterior openings suggests this introverted pneuma (Provatakis T. M., 1986, p. 50).

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[5] Hesychasm, in Eastern Christianity, type of monastic life in which practitioners seek divine quietness (Greek *hēsychia*) through the contemplation of God in uninterrupted prayer. (Britannica, 1998)

[6] (Unknown) Retrieved from: https://athosweblog.com/2010/01/17/980-maps-high-res/

B. Contextual Comparison

As we contextualized the early stages of the Athonite monasteries, I will dwell more into an analysis on socio-economic relationships with monks' environment as well as their countless challenges through the ages, studying both the peak moments as well as the points of total eclipse of the sub-peninsula's communities. For this reason, I both quote and cite a census table-graph from Professors Georgios Sidiropoulos and Fokion Kotzageorgis, who in their recent published research, accumulated various sources were they both could make cohesive conclusions and outlined the various difficulties and implications of undertaking a project such as this (2019).

MOUNT ATHOS: POPULATION CENSUS 1489-2011													
	1489	1520	1666-1670	1677	1764	1808	1800	1837	1850	1903	1951	1991	2011
Karyes [1]	30	33	-	-	-	-		200	-	-	453	216	193
Dafni [2]											98	16	
Dionysiou M.	80	118	-	-	111	64	200	86	102	131	66	50	36
Agiou Panteleimonos M. [3]	120	25	20	-	62	56	-	49	572	1.928	167	49	67
Agiou Pavlou M. [4]	190	34	200	-	103	128	35	71	214	250	193	71	147
Vatopedi M.	330	271	300	350	294	260	250	170	446	966	260	103	194
Docheiariou M.	120	20	-	-	110	63	-	30	70	60	38	42	53
Esphigmenou M.	50	30	80	-	47	43	30	47	105	91	65	52	2
Zografou M. [5]	66	114	200		156	158			84	155	112	19	42
Iviron M. [6]	50	151	400	1.100	337	295	200	160	267	456	114	63	36
Karakalou M.	30	4	500	50	137	99	-	86	88	130	83	21	45
Koutloumousiou M.	60	39	300	300	170	94	60	70	153	214	62	69	133
Konstamonitou M.	90	41	7	-	-	67	15	15	43	65	43	31	51
Great Lavra M.	300	200	600	450	241	565	200	120	663	1.187	540	307	382
Xenophontos M.	50	51	30	-	-	88	-	60	130	195	114	82	79
Xeropotamou M.	90	27	300	-	108	122	70	125	97	106	92	41	0
Osiou Grigoriou M.	270	39	60	-	49	49	100	19	92	105	90	67	96
Pantokratoros M.	40	91	200	150	167	136	40	30	185	548	154	58	38
Simonos Petras M.	40	4	200	-	23	38	-	30	71	108	69	58	75
Stavronikita M. [7]	X	X	30	150	55	51	40	25	60	219	17	37	39
Filotheou M.	70	18	50	30	83	70	-	33	170	133	97	86	65
Helandariou M.	170	132	800	-	216	214	180	170	177	385	72	75	58
SUM [8]		2.246	1.442	4.976	2.680	3.006	2.395	1.406	1.646	3.755	7.432	3.086	2.687	1.811

Figure 4: Author's translation of Mount Athos' Population Census Table-Graph (Kotzageorgis & Sidiropoulos, 2019, p. 138), [1] Karyes is the administrative center of Mount Athos, it has permanent non-monastic population, shops, workshops and small inns, every monastery has a permanent representative in the city (Mamaloukos & Koufopoulos, Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997). [2] Dafni act as a port and entry point for the monastic state, it also has a police office, inns and various shops but not permanent population (Provatakis T. , 1983, p. 21). [3] Agiou Panteleimonos Monastery is inhabited by Russian monks since the 13th century (Provatakis T. , 1983, p. 92). [4] Agiou Pavlou Monastery has Serbian, Romanian and Greek monks (Provatakis T. , 1983, p. 77). [5] Zografou Monastery is inhabited by Russian monks since the 13th century (Provatakis T. , 1983, p. 61). [6] Now a Greek Monastery, Iviron was originally a Georgian Monastic settlement (Provatakis T. M., 1986, p. 119). [7] It was founded as a Monastery at 1533, before it was a much smaller skete (Provatakis T. M., 1986, p. 115). [8] The demographics presented here for each monastic establishment account also the monks that live outside the Monastery's walls, either in kellia or sketes that belong to the Monastery's territory.

This table graph (Figure 4), presenting the population changes between 1489 and 2011 in Mount Athos will provide part of the basis in which I will analyze and compare the different periods of prosperity and decline in the peninsula's history. Yet as the authors themselves stated the partial obscurity of the Late Byzantine and Ottoman sources; usually exaggerated numbers when in pursuit of heavier taxation (Kotzageorgis & Sidiropoulos, 2019, pp. 126-128), this in itself will contextualize better the periodical economic strife of the monks.

1. The period before Ottoman Rule (11th century to late 14th century)

The centuries that fallowed the first literate testaments of the first monasteries' existence, namely the 11th and 12th centuries, saw a huge rise in the monks' population. Even though the various sources do not agree on the exact number of monks, with older ones giving estimates as high as 15.000 monks (Smyrnakis, 1903, p. 30) to more recent ones numbing an estimate of 7.000 monks (Aggelopoulos, 1987, p. 58). Still, the most recent research on this subject agrees to a total population of less than 10.000 monks (Kotzageorgis & Sidiropoulos, 2019, p. 126) for this period in the peninsula's history. One of the primary sources that give an estimate of those numbers is the Second Typicon of 1048, signed by the emperor alongside 158 abbots and monasteries' representatives, estimating up to 180 monasteries in number (Aggelopoulos, 1987, p. 57). To put this information in perspective, even if this number is exaggerated it is still far larger than the 20 monasteries that are still active (16th century to today). The striking rise of monks did not only bring an increase in construction work, but also a food distribution problem to the general population alongside infighting (Provatakis T. , 1983, p. 14). This period should be considered an exception in the Athonite long monastic history, as the next centuries were marked by a huge demise in the population and desolation of countless of monasteries, as raids in the plagued the region in the early 13th up until the first years of the 14th century.

During the 13th desolation and uncertainty in the Balkans and Anatolia came to be as the conquest and pillage of Constantinople in 1204 during the 4th crusade by Western forces divided the lands of the already weakened Byzantine Empire. It is during this period (1204-1261) that a lot of atrocities took place in Mount Athos, the monks were under constant attacks from Italian and Greek pirates but mainly by Catalan raiders, as the protection from a strong state was no more. The raids were numerous and so severe that forced many monks out of the peninsula or into moving further into the forests of the area and away from the big monastic complexes. It was this period that they asked help from the pope Innocentius the third to order the Western raiders to stop the hostilities -a controversial action from a theological viewpoint- in which the pope took action by issuing decrees that would guarantee the peninsula's safety (Provatakis T. , 1983, p. 15). This was outdone quickly by the previous pope's successor Honorius the third who condemn the Mountain's monks of apostasy and gave their land (outside the peninsula) to the various Latin states of the region (Christou, 1987, p. 131). The decrease in population was extreme with the majority of the monasteries being abandoned. The raids themselves had as target the accumulated wealth of the monasteries, while even lead roofs were taken by Catalan pirates (Mamaloukos S. B., The buildings of Vatopedi and their patrons, 1996, p. 117).

The instability and uncertainty of the 13th and early 14th centuries with various conquerors passing by the land were followed by years of prosperity with the weak and reestablished Byzantine Empire safeguarding and funding once again the Monasteries of Mnt. Athos (Christou, 1987, p. 134). While also many Slavic Kingdoms started funding their own monastic communities, namely Serbians, Bulgarians and Russians. It was the end of the 14th century that also saw the development of idiorrhythmic[7] communities and hesychastic practicing; monks living separately, owning their own property and the means of survival (finding or cultivating for their food), with a much more fluid schedule than that of the Monasteries (Provatakis T. , 1983, p. 17). In 1406 with imperial decree[8] women were prohibited to enter both Mount Athos as well as the other subsidiary properties that the monasteries owned outside the peninsula, even though this was already in force for a long time (Provatakis T. , 1983, p. 17). At the end of the century and as the Ottoman hegemony crossed the Dardanelle and conquered much of the Southern Balkans, the monks bought off their special status of having an autonomous self-governance, in exchange of submitting an annual tax to the Sultan, with a decree that issued by Murad the 1st and revalidated by his successor up until Mehmed the Conqueror (Hellier, 1997, p. 118).

It is important to state that most of the layout that the monasteries have today, even if many of the buildings are of later dates, was formed up until the Ottoman period. The fortress-like volumes of the Athonite monuments were of functional use as to protect the inhabitants of the countless enemies during the previous centuries (Papadopoulos, 1991, p. 76). In contrast the Ottoman conquest and consolidation on the Eastern Mediterranean brought relative peace in the area. The new threat of the 600-year-old communities was now the severe taxation of the Sublime Porte (Aggelopoulos, 1987, pp. 67-68).

2. Ottoman Rule (mid-15th to early 20th centuries)

The strategy of respecting the socio-economic status quo of the conquered lands is one of the main factors that gave to the early years of Ottoman Empire its terrific success and territorial stability. The newfound Ottoman hegemony would try to incorporate and maintain the normality of the conquered lands that would not resist, this includes the under conditions freedom of religious belief (with a much heavier taxation to non-Islamic population) (Necipoglu, 1990). This firstly peaceful interaction was also the case for the relations between the monastic societies and the first Sultans during the 15th century, yet, as all of the sources that will be cited state the very aggressive taxation policies of the Empire to Mount Athos.

The monastic population was far less than the peninsula's prime years of the 11th century, the majority of the once hundreds of building complexes were abandoned throughout 13th and 14th centuries and so they were integrated to the monasteries that survived. Still the population was scattered into small cabin like-houses named *kellia*

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[7] Late Greek *idiorrhythmo*s (from Greek *idio-* + *rhythmos* measured motion, measure, proportion) + English *-ic* (Merriam-Webster, Idiorrhythmic, n.d.)

[8] This was also extended to exclude female animals from entering the Monastic grounds (Provatakis T. , 1983, p. 17)

(literally cells), with incorporated small temple for the monk's religious needs. It was often that those structures were sometimes built close to each other forming small village like landscapes. Those entities soon formed the *sketes*[9]; much smaller establishments than those of the major monasteries (Provatakis T. , 1983, p. 18), with few monks in total inhabiting them. These small communes were "subjects" -in an administrative sense- to the major monasteries of the area, yet that did not affect the more extreme lifestyle of the sketes' dwellers due to the already mentioned idiorrhythmic monasticism and the harsh taxation of the Ottoman state that forced many monks of the late 15th to mid-18th centuries to absolute poverty (Christou, 1987, pp. 190-195). To comprehend better the level of effect in population we can reference the census graph (Figure 4), in which we find out that the 1520 census -demographic derived mainly from taxation information (Kotzageorgis & Sidiropoulos, 2019)- gives a total population number of 1.442. In complete contrast the number in 1666-1670 is three and a half times bigger, with absolute numbers to almost every monastic settlement. If we add the 1677 census in which half the monasteries are gone, we can conclude that either the taxation forced monks to abandon the Athonite peninsula (in only 7 years) or that the taxation mechanics of the Ottomans to their subjects was enlarged, counting more people than they truly were, according to the needs of the Sublime Porte at the time. It is also highly possible that both cases are correct, as many sources state the ever-larger movement of monks to the idiorrhythmic way of monastic life.

It is this period that saw the Monastic Societies of Mount Athos[10] to be in the worst state since the 13th century. The diet of the monks was also changed; the monks were allowed under these conditions to hunt hares and wild boars, something that did not happened in the past nor in present, as the monastic communities of the sub-peninsula are in strict fasting with meat eclipsing completely from the "allowed" dishes (Hatzifotis, 1995, p. 24). Yet during this period the monks were also able, through the development of the abovementioned idiorrhythmic communities to work their professions and survive easier than the previous communal type of living. It was also a period that many of the Orthodox Slavic nations[11] help economically the monasteries with donations from monks' visits and relic processions.

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[9] New Greek *skētē*, from Late Greek *Skitis, Skētis*, desert in northern Egypt once famous for its many hermitages (Merriam-Webster, Skete, n.d.)

[10] A shared calamity for many non-Islamic communities of the Ottoman Empire of the time, Christians and Jewish populations (Christou, 1987, pp. 183-184)

[11] Namely the principalities of Moldova and Wallachia, Russian tsars and the Iberian hegemony (modern day Georgia) (Provatakis T. , 1983, p. 17)

Figure 5: Photograph (1920-30) of the skete of St Demetrius, we can see the village-like formation of the previously mentioned merging of various kellia (Koufopoulos & Myrantheus, 1996, p. 213)

The late 17th and early 18th centuries marked by a steadily rise in the population of the Athonite peninsula alongside a better economic situation; not only the idiorrhythmic monasticism improved their conditions as they came closer to their natural surroundings and a more sustainable way of life but their economic relationships with communities outside of Athos became stronger (Provatakis T. , 1983, p. 18). This prosperity peaked during the mid and later half of the 18th century both economically and spiritually. The Ottoman Empire's huge loss to the Russian Empire and the Kuchuk-Kainarji treaty in 1774 that followed the war, made Russian Empire the "protector" of Orthodox Christians inside Ottoman territory, this brought a somewhat relaxation in the taxation of the Christian populations. Spiritually, the "Athonite Academy" was built and established in 1749, an institution that had many of the Greek Romanticists of the Greek Revolution (1821-1829) as students (Provatakis T. M., 1986, pp. 93-94). This period was a first point of return for the communities, as some of the once idiorrhythmic sketes return to the original communal order, with the first monastic community to do so was the Xenophontos Monastery in 1784 (Hellier, 1997, p. 134), while many other of the monasteries started to repair and extent in volume.[12]

This period of prosperity was cut short as the decaying Ottoman Empire of the 19th century and in sight of the many revolutions of the Balkan states, the Sultan pressured once again with both taxes and troops the peaceful monastic haven of Mount Athos. The peak of pressure was during the Greek War of independence (1921-1829) when 3.000 Ottoman troops stationed in the mouth of the peninsula with the Monasteries forced to provide them with both food and money (Christou, 1987, pp. 267-274). The second half of the century, after the plunder of the population of the monks, as can

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[12] This was not the case for some of the monasteries, as many were abandoned completely after fallen in complete disrepair during the harsh 16th and 17th centuries. (Provatakis T. , 1983, p. 89)

been seen from the years 1800 to 1837 (from Figure 4) was once again in road to economic growth. The monks, after the creation of the Modern Greek state (1930), started investing and saving money in new founded Greek banks or Turkish Banks of Greek ownership (Bouroutis, 2013). The economic growth did not come only from the Greeks of the Balkans, in mid to late 19th century huge donations came from Russia to the monasteries along with a huge rise in the Russian monks' population, yet this rapid growth came to a steep end as in 1913 the Russian Navy took more than 800 Russian monks to Odessa after a huge religious infight (Provatakis T. , 1983, p. 20), while with the later October revolution each and all donations stopped completely.

After the Balkan Wars on the start of the 20th century and the fighting between the Orthodox States of the Balkans over the control of the peninsula Mount Athos became officially part of Greece in 1923 with the condition of respecting its autonomous and self-governing state of the small peninsula (Aggelopoulos, 1987, pp. 77-78). This meant the end of Ottoman rule for the monasteries, as well as a tax-free status for the communities.

It is important to state that Mount Athos stayed in the obscurity of Western scholars for most of its existence, until the Romantic era and the turn in interest of the international community to the Ancient Greek Heritage brought many visitors during the 18th and 19th centuries in Greece and the Orient (Della Dora, 2005). The intention of this chapter was to give the reader an understanding on what those monastic communities had to face for many centuries, yet even during the harshest of periods they preserved the tradition that this place inherited to them. It is of the outmost importance to also evaluate what these centuries of monastic life gave in to the built environment of the sub-peninsula as this contextualization will enhance our understanding of this living tradition.

III.   Sustainability and Architecture: Cases of Resilience

To further understand the impact of the previous chapter's economic instabilities as well as the monastic communities' resilient and constant strife we have to understand the ways of life of the monks, his schedule and dedication to his spiritual focus as well as the architecture that developed throughout the many years. In this chapter there will be a layout of many examples of Monastic complexes as well as auxiliary buildings that either continue to be used in the same way, with alternations or not, or are testimonial paradigms of constant "repair and reuse" mindset.

A. Monastic Life, seclusion and serenity

Firstly, as already stated, comprehending the daily schedule of the dweller is to understand the dwelling, in our case the monk and the buildings that he lives in. In a communal monastic society in Mount Athos, a day of every monk is divided in three equal parts. The first eight hours he is praying in the temple, the next eight hours he is working (a manual labor; working in workshops, fishing, cultivating the land) while the last eight hours of the day he studies, praying in his kelli and rests (Provatakis T. M., 1986, pp. 63-64). There might be slightly changes per hierarchy and age needs, but

the hours in the temple and the gatherings for food are all in common. It is also an interesting fact that the time "spent" on studying is also considering both as praying as well as resting (Provatakis T. , 1983, p. 22).

By taking the aforementioned daily schedule of the monk and transcribe it into a building program we should reach in a conclusive idea of what type of buildings are needed; most likely the ones that the monasteries are partitioned from. For praying, and any religious rituals a temple or more are needed, for working, depending on the necessary tasks that the monks have, workshops, warehouses and other similar facilities are needed, while for personal time such us studying and sleeping, personal quarters are needed. Lastly, for dinning they need a place to eat, and all the relevant buildings for producing the said food. Truly, this program that formed by firstly describing the basic attributes of a monk's life is very close to what the Athonite Monasteries are.

In the center of every monastery is the main church, and is the oldest building of the complex, as it was the most valuable to protect, repair and even expand throughout the ages (Christou, 1987, pp. 53-56). Usually right across the temple is the refectory, where the monks gather after the end of the liturgy in the morning, if not fasting, and in the noon. These buildings are large in size, relevant to the overall size of the monastery, and can fit in both monks and visitors. Around those buildings are, in a fortress-like layout, the dwellings of the monks, kitchens, bakery, small hospital, space for the visitors' welcoming and other smaller churches. In contrast to the Western Catholic Monasteries, were the monks sleep in dormitories, in Mount Athos[13] each monk has his own personal space called *kelli*[14], small in size with a bed and basic furnishment. The rest of the work spaces are usually outside the castle-like monasteries, yet in close proximity, depending on the use of each building.

B. The Monastic complexes, now and then

To dwell further into understanding if this layout remained the same for years to come, and if it truly is a manifestation of architectural resilience and sustainability, a comparison will be developed between old illustrations and modern-day photographs. We can collect information by the syncretic juxtaposition of different era depictions, like the archeological process of comparing old sources to current state findings. In this sub-chapter there will be deposition of early to mid-18th century illustrations by Vasily Grigorovich Barsky[15] as well as other western European travelers' depictions of monasteries in comparison to their present-day appearance.

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[13] This aspect, cell like "apartments" forming around the main temple, applies to almost every Orthodox Christian Monasteries (Provatakis T. M., 1986, p. 51), whilst with different material attributes, depending on the availability of the region (Orlandos, 1999, p. 32)

[14] Literally meaning "cell" in Greek

[15] Russian: Василий Григорьевич Григорович-Барский (1701-1747), pilgrim -and later monk- from Kiev (Barsky, 2010)

1. Pantokratoros Monastery

Figure 6: Pantokratoros Monastery, Barsky 1744 (Barsky, 2010)

Figure 7: Pantokratoros Monastery, Nick Christodoulou 2018[16]

The V. Barsky's depiction of Pantokratoros Monastery was made in 1744, and even though we know that a part of the monastery was renovated in 1741, other major parts of it are from the early 15th century (Christou, 1987, pp. 358-359). By comparing the two figures (6-7) we can clearly see the similarities in the morphology of the monastery. The two towers, the entrance, the church and the masonry basis that forms the castle-like shape of the monastery are with not a doubt similar. What strike as different are the extra floors in the masonry buildings and the exomonastic structures

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[16] Retrieved from: https://www.flickr.com/photos/132692163@N06/27589268417

(left side of the photograph Figure 7). Even if those exomonastic buildings are more ephemeral and prone to fire disasters, still, in Barsky's illustration we see buildings like warehouses, farmer houses and shipyards.

2. Dionysiou Monastery

Figure 8: Dionysiou Monastery, Barsky 1744 (Barsky, 2010)

Figure 9: Dionysiou Monastery, (Unknown) 2018[17]

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[17] Retrieved from: https://www.flickr.com/photos/johnthefinn/49836110583

The heavy and sharp looking Dionysiou Monastery was founded in the 15th century, yet most of its present characteristics are dated from early to mid-16th century (Christou, 1987, pp. 369-370). Starting of pointing out the similarities between the 1744's illustration and today's photograph, is the tower, the heavyweight and tall masonry walls as well as most of its top floors, on the exterior in both cases we see the buildings and the gardens in similar positions. The main differences that can be found are, either due to Barsky's inclusiveness, more floors in some of the complex's masonry walls as well as their extensions' characteristics; balcony like additions that are covered and are closed interior spaces. Lastly, a provoking, to the architectural eye, feature is the construct in the right side of the photograph (Figure 9) with solar panels, while it is built to support the energy needs of the monastery it is designed without a sense of aesthetic cohesion.

3. Simonos Petras Monastery
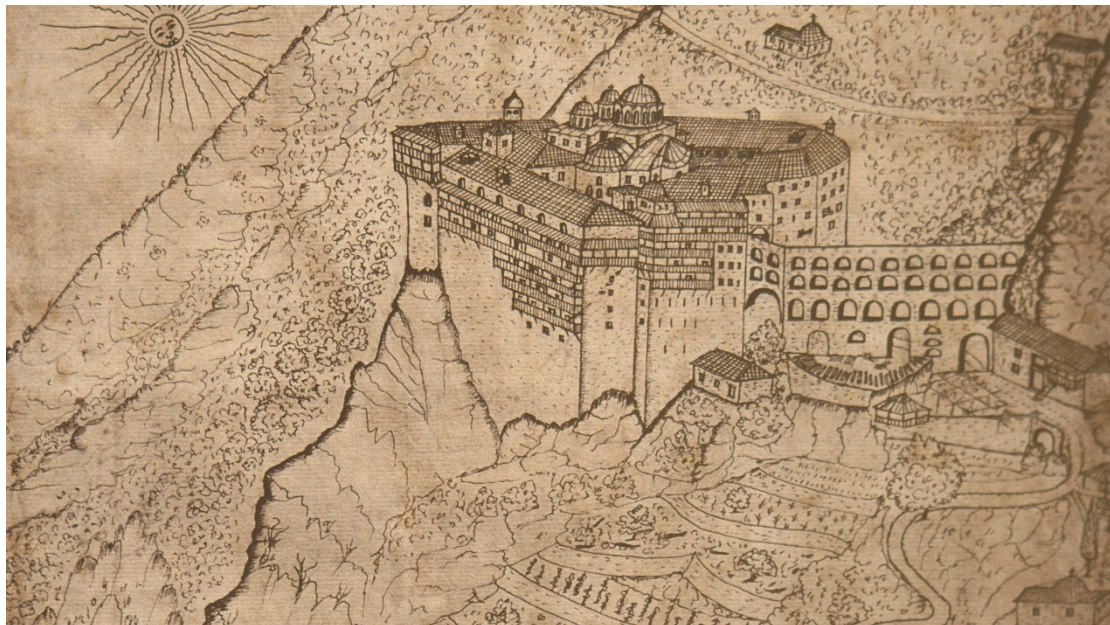
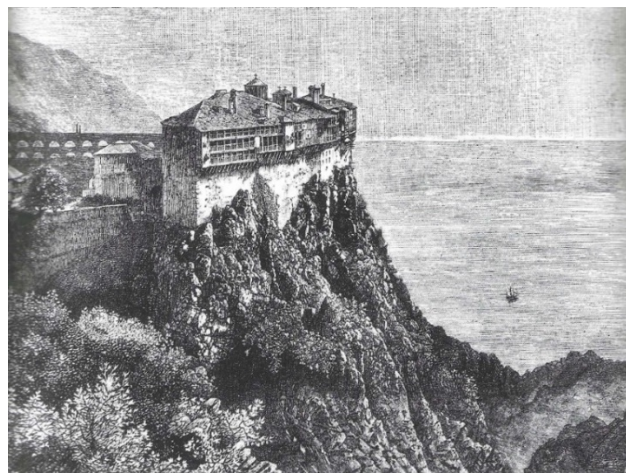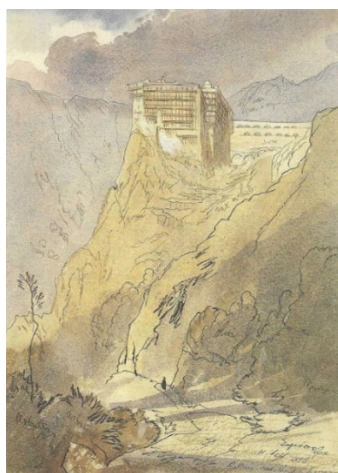*Figure 10: Simonos Petras Monastery, Barsky 1744 (Barsky, 2010)*

Figure 11: Simonos Petras Monastery, Edward Lear 1856 aquarelle (Left), A. Riley 1883, engraving (Right) (Theocharidis, Αρχιτεκτονική της Μονής [Architecture of the Monastery], 1991)

Figure 12: The Monastery after the fire of 1891, T. Taylor (Left) (Theocharidis, Αρχιτεκτονική της Μονής [Architecture of the Monastery], 1991), a monk in his cell's balcony, Vlasis Vlasidis 2020 (Right)[18]

Figure 13: The Monastery of Simonos Petras today, Vlasis Vlasidis 2020[19], some of the buildings on the right have been built in the 20th century

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[18] Retrieved from: http://www.macedonian-heritage.gr/Athos/Monastery/Simonos%20Petras.html

[19] ibid

Just as the Dionysiou Monastery, the Simonos Petras Monastery has also have been built in a rock in a steep side of a mountain, n the South West side of the peninsula. It is one of the most impressive monasteries of Mount Athos, founded in the 13th century, although due to its position and the narrowness and close proximity of the different uses' buildings it has had suffered many times fire catastrophes, with most of the times only the masonry walls still standing (Christou, 1987, p. 371). From the various illustrations that are presented here we can conclude that the overall layout and morphology dates from V. Basky's drawings on his pilgrimage in 1744. Yet, as can been seen from the usual destruction from fire hazards that the monastery was prone to, the monks rebuilt again and again in the same still-standing walls.

4. Stavronikita Monastery

Figure 14: Stavronikita Monastery, Barsky 1744 (Barsky, 2010)

The smallest in volume monastery of the peninsula, it is reported to exist from the early years of the 11th century, yet it was later abandoned during the pirate attacks of the 13th century. The general morphology we see today probably was built in the early 16th century, as it was most likely much smaller in size (Provatakis T. , 1983, p. 79). In the Stavronikita Monastery all but the masonry walls were burnt down during a fire in 1607, and again partially destroyed through smaller fires in 1741,1864 and 1879. The same problem of fire hazards was common in all of the Athonite Monasteries, modernization of cooking process in many of the monasteries lowered the risks of those catastrophes (Hellier, 1997, p. 151). V. Barsky's illustration is 3 years after the fire of 1741, yet again we see many similarities to today; the defensive tower, characteristic building of many of the monasteries, the church in the middle of the interior plaza, and the fortress that surrounds it. The added floors and expansion with arched masonry walls that is seen in the photograph (Figure 15) was built later in the century. Lastly, an important detail in Barsky's illustration is the depiction of the monks' works outside the monastery.

Figure 15: Stavronikita Monastery during the 90's (Hellier, 1997)

The above examples give a general idea on morphological architectural aspects, that are immediately related to the life of the monk and his determination to continue a tradition. If we are to point out a general conclusion for this sub chapter for the architectural attributes of the monasteries then that is the architectural morphological and aesthetical cohesion throughout the years. All of the above paradigms are building complexes devised by different architectural elements, which when alone, might not be as interesting as the result that is delivered. The church and the base of the complexes are made of thick masonry walls, while the upper floors are usually made from ephemeral materials (due to their likelihood to be replaced after a distruction), mainly wood. Lastly, the drawings of the Russian pilgrim are detailed with the,

approximate to the monastery, exomonastic buildings and the farms of the monks, which will be the focus of the next sub-chapter.

C. The Exomonastic buildings

In the previous part a review of the monastic complexes was formed, yet in order to have a more inclusive outlook on the still standing tradition of Mount Athos an outlook on the auxiliary buildings will be made. To discover the importance of those buildings we need to recall and further explain the needs of the monk himself. As mentioned before, the monk's life moves around a repetitive, with a religious zeal, schedule which is comprised by the times of praying, eating, working, studying and finally resting. In this chapter we will analyze some of the buildings that cover the needs of working and feeding oneself.

First and foremost, in order to understand the buildings related to the nourishment of the monastic communities, we have to understand completely the monk's eating tradition. In the whole of Mount Athos meat is prohibited as well as the female animals, which relates to the production of cheese[20] been made in the Monasteries' subsidiaries outside the peninsula (Hatzifotis, 1995, pp. 24-25). The diet is based on bread, olive oil and olives, wine, vegetables (that can grow in the Mediterranean climate), honey and fishery (Aggelopoulos, 1987, p. 198). All but the ingredients for bread, namely wheat, are made and gathered in the peninsula, it is cultivated in the Monasteries' various subsidiaries and fields outside Mount Athos, like the before mentioned cheese production, until finally sent in the monasteries' warehouses (Koufopoulos & Myrantheus, 1996, p. 205). All the buildings related to these products are placed in places related to proximity, chain of production and topography, as many of the buildings that work with water needed a height difference.

Apart from the buildings that help in the processing and production of food, there are many structures related to works that helped the monks in gathering funds for their monasteries, as well as providing the tools for immediate repairs and/or construction works. Such buildings were sawmills, smitheries and various forges, carpentry shops and other workshops such as candle makers.

1. Vatopedi Monastery and its exomonastic buildings

Founded in 972-985, is second oldest monastic establishment after the Great Lavra Monastery and second in the hierarchy of the Autonomous State. From early on in its history it was stated to be one of the richest and bigger in whole of Mount Athos (Provatakis T. , 1983, p. 39). As can been seen in the census table graph (Figure 4) it never had less than 100 monks in more than half a millennium. The auxiliary buildings outside the greater monastic complex are 50, and were built in close proximity, while they connect with each other with cobblestone roads, forming an image of a village (Koufopoulos & Myrantheus, 1996, p. 200).

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[20] I deliberately use the word "cheese" and not "dairy products" as milk is also excluded from the diet (Hatzifotis, 1995, p. 25)

The buildings include all the necessary for the daily function of the monastery uses. Along the coastline there are the greater shipyard, fishery houses and wheat warehouses, all needed for the works relevant to sea and the store of importing of goods. In close proximity are also a carpentry workshop, other now abandoned warehouses, garden houses and an olive mill. Moving closer to the monastery, we find various small worker houses, storage buildings, metal and coper smitheries along with one of a kind in Mount Athos smithery that covered with tin various metallic products (Koufopoulos & Myrantheus, 1996, pp. 202-209). In the same area and outside the gate of the monastery are the flour mill, power station, stables (with mules used for cultivating the various farms) and one of the cemeteries, while south of the monastery and in middle of the vineyards are the winepress building and the water reservoir, in higher altitude, built in 1901 for firefighting purposes (Koufopoulos & Myrantheus, 1996, pp. 211-212). Among the buildings that were referenced are also various small churches and *kellia*.

Figure 16: Vatopedi Monastery and its surrounding built environment (Koufopoulos & Myrantheus, 1996, p. 201)

The choice of the Monastery of Vatopedi as an example was made due to its overall preservation state of those auxiliary buildings, and thus providing a clear view of the architectural morphology of the ensemble. Pictures and drawings will be presented to give the said impression to the reader.

Figure 17: Fishing houses along the North East part of the monastery's coastline, the ground floor was the storage for the boats as well as the fishing equipment, while the other floors were dwellings for the monks or laborers paid by the monastery (Koufopoulos & Myrantheus, 1996, p. 206). Some of the buildings are still in use.
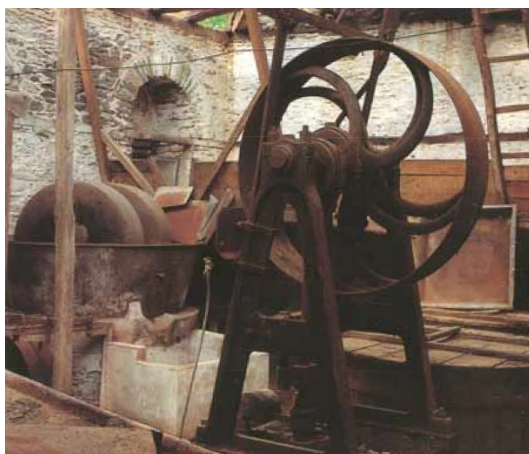

Figure 18: The olive oil mill, powered by the water movement has still remarkable equipment (Left), the flour mill, powered too with the water falling to the mill's kinetic mechanism (Right), both buildings are from the 19th century (Koufopoulos & Myrantheus, 1996, pp. 207, 209).
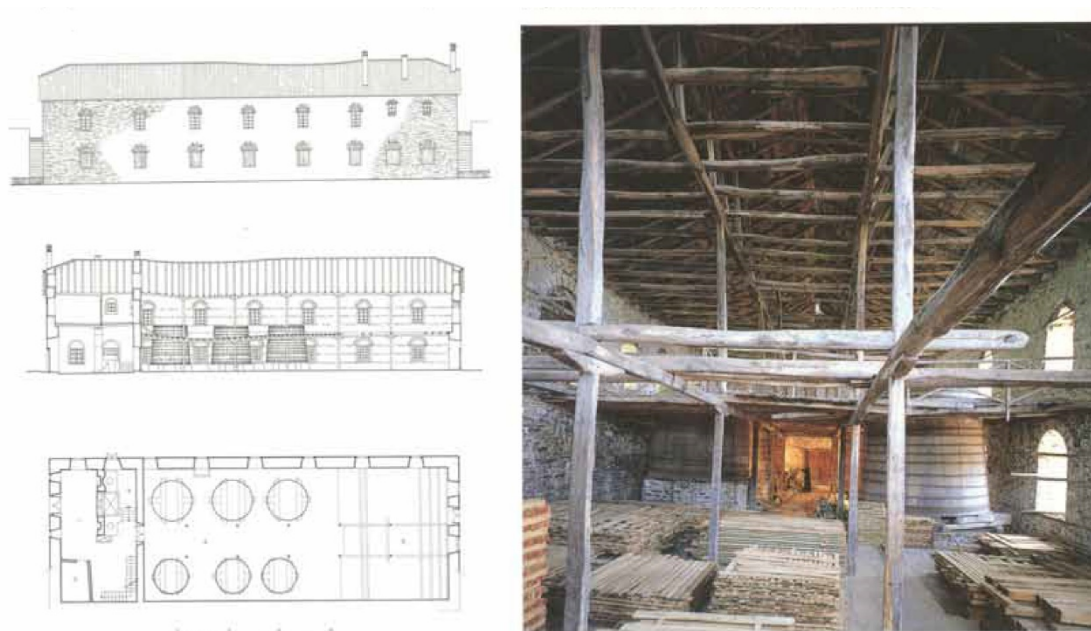
Figure 19: The wine press, building of 1901, the barels have a total capacity of 200m³ (Koufopoulos & Myrantheus, 1996, p. 211).

Many of the exomonastic buildings, such as the olive oil mill and flour mill (Figure 18) were also mentioned being in the same place and with the same function by V. Barsky, even though the buildings we see today are definitely from the 19th century (Koufopoulos & Myrantheus, 1996, p. 207). This may come as no surprise as there are other buildings, mainly inside the monastery that dated from the 16th century yet they are cited in literature from as back as the early 13th century (Mamaloukos S. B., The buildings of Vatopedi and their patrons, 1996, p. 119). While other buildings' function was made in different location, as in the case of the wine press (Figure 19), which was inside the monastery before 1901 (Koufopoulos & Myrantheus, 1996, pp. 211-212). Overall, the Monastery's present state was formed through the continuous restoration and rebuilding works throughout the millennia long history of this Religious Institution.

2. Various exomonastic buildings in Mount Athos

Continuing the evaluation of various case studies of M. Athos' buildings, it would be wise to analyze similar to Vatopedi's buildings in monasteries, with different type of topography. In Simonos Petras Monastery, both the main complex and the exomonastic buildings are placed in a steep mountain side, even though many of its old buildings destroyed in fire hazards in the last centuries, there are some buildings that still standing with interesting architectural attributes. In both of the following examples (Figures 20 & 21) the builders of the structures use the topography to their advantage; the smithery incorporates the rock inside its building, as if it an extension of the said hill, while the flour mill is using the height difference for the need of water movement through the masonry flume. Both buildings, but mainly the smithery follows a much similar type of morphology as the main Monastic complex itself (chapter III.B.3).
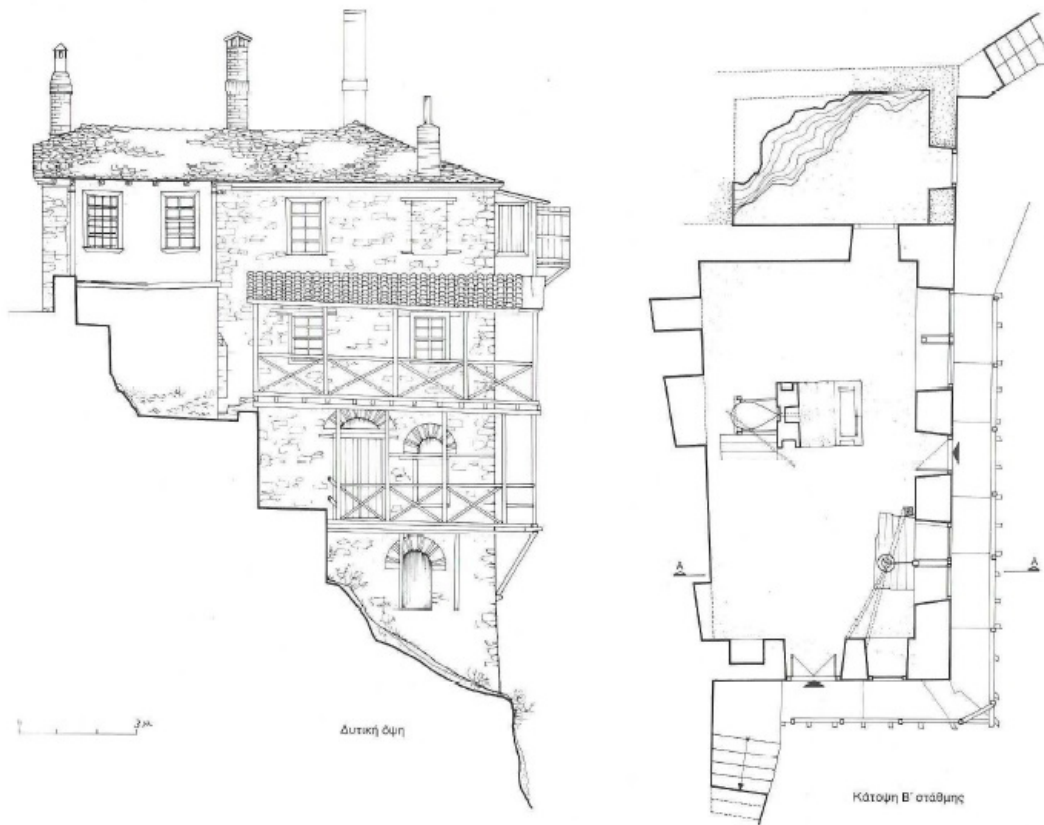
Figure 20: Drawings of the smithery of the Monastery of Simonos Petras, still standing to this day, built in 1892 after the destructive fire of 1891 (Theocharidis, Αρχιτεκτονική της Μονής [Architecture of the Monastery], 1991)
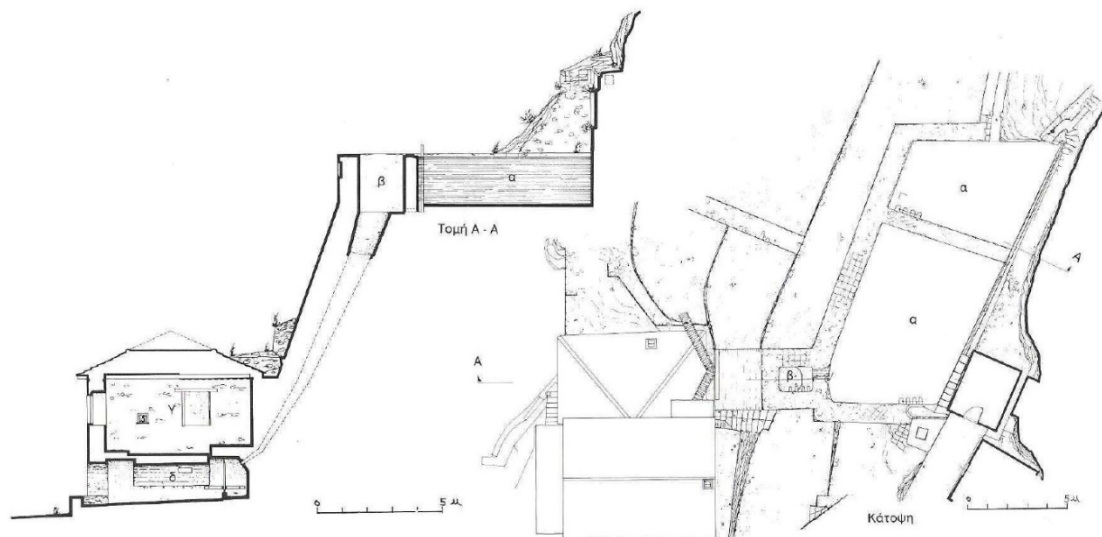

Figure 21: The flour mill of Simonos Petras Monastery (Theocharidis, Αρχιτεκτονική της Μονής [Architecture of the Monastery], 1991)

In relation to the differences of Simonos Petras Monastery to other religious complexes of the peninsula, is that due to limited space, derived from the impressive but daring position, many of the uses that in other monasteries were been held outside the main complex, here every square meter had a use. Yet, all these spaces have been stripped

of their original use in the last 50 years due to the abandonment of the traditional way of wine production.
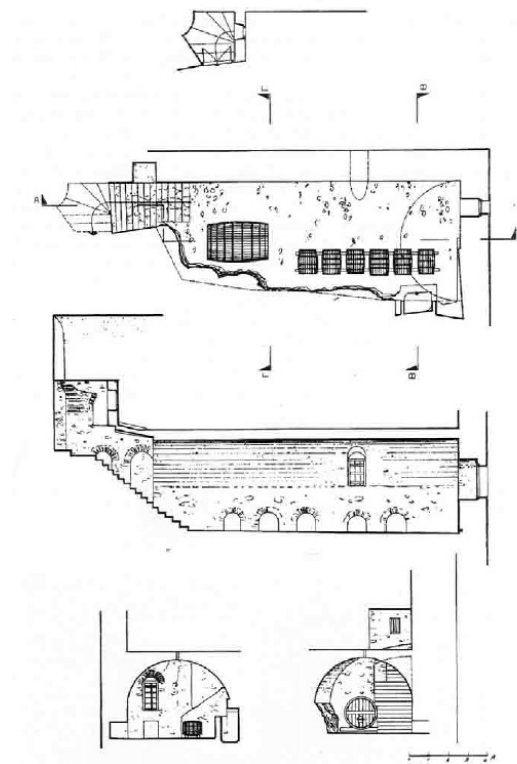

Figure 22: The wine storage room of the Monastery positioned in the bottom of the Eastern Wing (Mamaloukos S. B., Η παραγωγή του κρασιού στην Μονή Σίμωνος Πέτρας Αγίου Ορους [Wine production in Simonos Petras Monastery, Mount Athos], 1993, p. 370)

Even though the majority of the exomonastic buildings have not been studied and surveyed there has been extensive research by prof. Stavros Mamaloukos and Petros Koufopoulos (Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997) on the smitheries of the peninsula. All of the still standing metalwork workshops have been mapped and presented here (Figure 23) in a typology codex. Some of the listed smitheries are still in use to this day, the personnel that works there are both monks and workers paid by the Monasteries (Mamaloukos & Koufopoulos, Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997, p. 49).
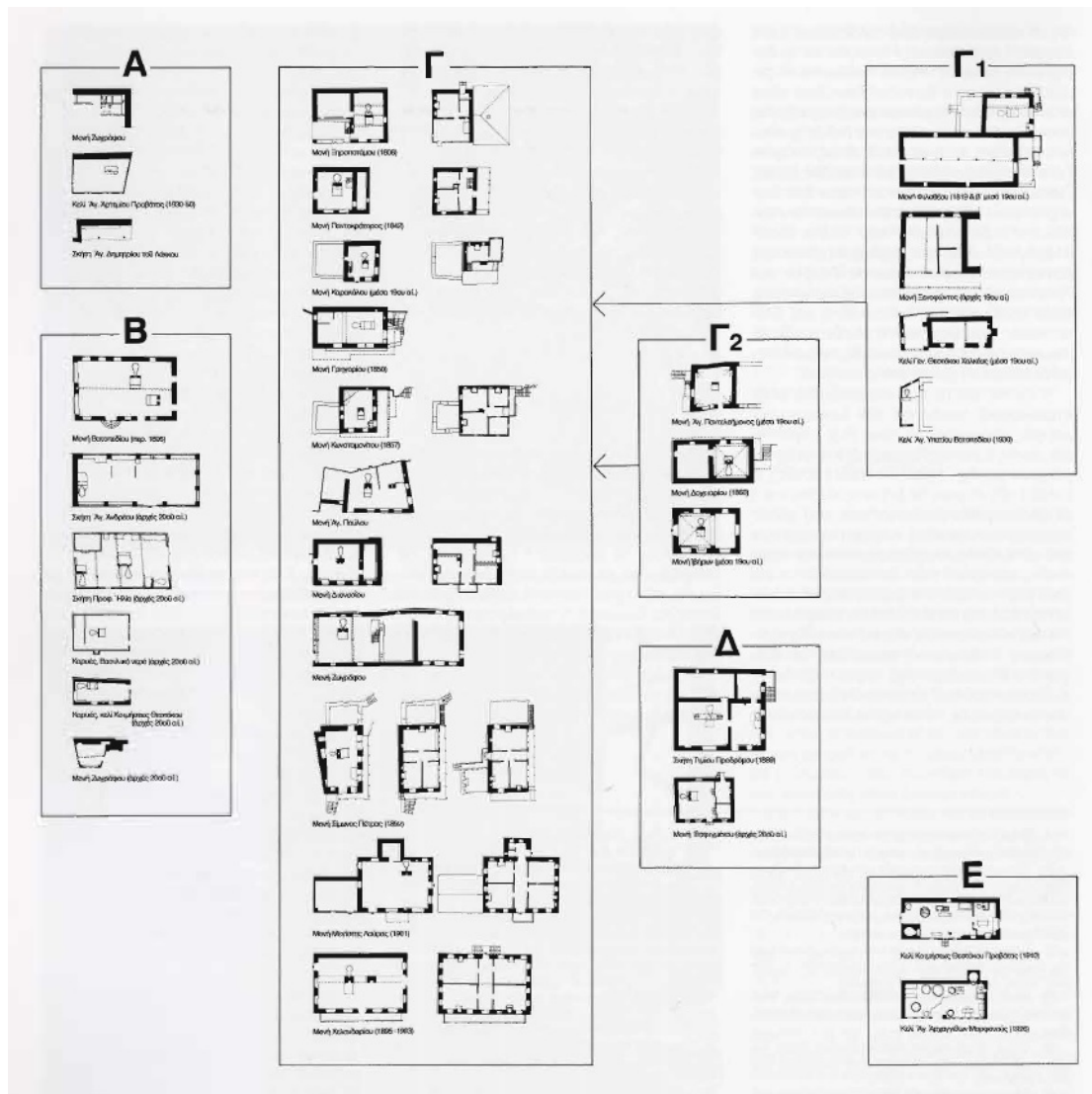
Figure 23: Table of the various smitheries' typologies of Mount Athos. A. simple sheds, B. Single floor workshops, Γ, Γ1-Γ2. Workshops with the forge in the ground floor and worker's houses in the top floors (Simonos Petras smithery is 3rd from the bottom in the Γ list), Δ. workshops with both the forge and worker's house in the ground floor, E. multi-purpose workshops. (Mamaloukos & Koufopoulos, Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997, p. 74)

Another interesting type of building is the *magkipeion*. It is the building were the monks prepared the bread, it is usually consisted of a unpartitioned space with tables for the preparation and ovens for the baking process. Not many as old as the one in the Monastery of Great Lavra still standing, yet it is an example of how monks used and still use those spaces. The mentioned magkipeion was subject to at least two significant repairs, dating by inscriptions on its main facade to 1742 and 1764. Yet one of its ovens has an inscription of 1531 (not used today) signing that the wall surrounding this oven might be of the same age (Theocharidis & Mamaloukos, The Magkipeion of Megisti Lavra, Mt. Athos, 2014). Even though these types of buildings are inside the monastery's wall, they were usually separated due to the high probability of fire hazard. Similar to the structures previously presented, this building also showcases a simple architecture form as well as the essence of continuous reusability throughout centuries of monastic life.

Figure 24 Magkipeion in Monastery of Great Lavra (Theocharidis & Mamaloukos, The Magkipeion of Megisti Lavra, Mt. Athos, 2014, p. 13)
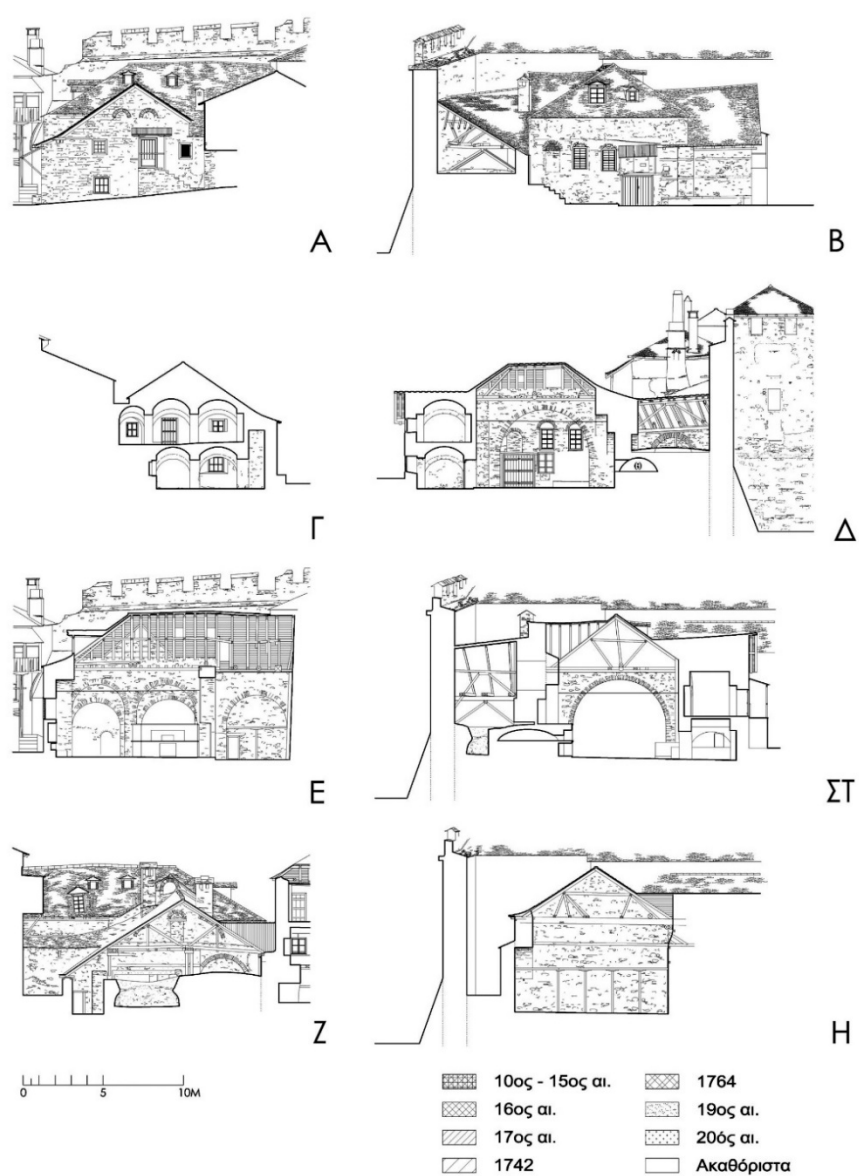

A

B

Γ

Δ

E

ΣΤ

Z

H

10ος - 15ος αι.		1764	
16ος αι.		19ος αι.	
17ος αι.		20ός αι.	
1742		Ακαθόριστα	

Figure 25 Architectural Survey Drawings of Magkipeion (Theocharidis & Mamaloukos, The Magkipeion of Megisti Lavra, Mt. Athos, 2014, p. 12)

3. Manifestation of extreme sustainable way of living

The monks in the monasteries of Mount Athos do not own any land, the same roof is shared in both communal and idiorrhythmic monasteries, and monks, depending on the task that is given to them by the community are obliged to either work on the fields, on workshops, in fishing, in cooking etc. By this type of societal forming, they cover all aspects of their daily lives, their societies are a case of a closed circular economies, and in their search for individual religious salvation they formed a collective-like community (Aggelopoulos, 1987, pp. 197-198). Yet in this sub-chapter extreme instances of individualism will be showcased.

Following the examples of early Christian hermitic tradition, first appearing in Egypt (Hatzifotis, 1995, p. 67), and during cases of uttermost poverty in the 16th and 17th centuries in the peninsula's history, cases of extreme resilience started to materialize. Monks chose to move out of the communal monasteries and in certain areas of the peninsula, notably in the southern side of the Mount Athos, they built with poor quality and easy to find materials (rocks and wood) small dwellings, in difficult to access areas, they were completely responsible for finding and gathering food (the only instance of eating meat in the Athonite history) while they produced various religious in use products to sell for gathering money (Aggelopoulos, 1987, pp. 110-111).

Figure 26: Hermits' Huts in Karoulia area, the southernmost area of the peninsula, Vlasis Vlasidis 2020[21], the huts showcase construction techniques of the early 20th century (wooden walls) and repairs with modern day metallic materials, showcasing the long history of these ephemeral dwellings.

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[21] Retrieved from: http://www.macedonian-heritage.gr/Athos/Hesychasterion/Karoulia.html

Figure 27: Another instance of ascetic huts in Vigla of Great Lavra (Charitopoulos, 1995), the almost unreachable place of the dwellings adds to the feeling of seclusion.

In this chapter, many paradigms of various constructions were presented as to create a general idea of the morphology, architecture and materiality of Athonite buildings, as well as the idea of reusability and resilience inherited in the monks' life. To finalize the ideas of the said aspects of the monastic communes we have to dwell into their state in the modern post-war age.

IV.   Future Past, thoughts on tomorrow

Annexed into the Greek State in 1923, Mount Athos enjoyed the lift of the much-dreaded Ottoman taxation, yet the various subsidiaries outside the peninsula in Greece, Romania and Russia were taken away, usually with financial compensation (Aggelopoulos, 1987, p. 78), stripping the monasteries from their income. The war left untarnished the monastic communities, as they did not oppose any threats to the invading forces of the Axis, yet it was through this peninsula that many Allied escapees left for Crete and then Egypt (Della Dora, 2005). Nevertheless, it is the last 60 years, from 1960's till today that the Athonite state comes through a different reality.

For many centuries Mount Athos was a beacon of literature and knowledge safeguarding, evident by both the treasures (some from the antiquity) that were preserved and copied (Provatakis T. M., 1986, pp. 32-34) as well as the importance of the Athonite Institute that had an important role for the Greek Enlightenment of the 18th and 19th centuries[22]. It was also an important place for the various Orthodox

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[22] Stated in chapter II.B.2

Christian principalities of Eastern Europe, such as Serbia, Moldavia and Wallachia, modern day Romania, Russia and Georgia, with many pilgrims, even rulers visiting and donating to various monasteries throughout the Athonite long history. Although it served an important role in this cultural preservation, the rising standards of the countries' education levels and population literacy percentages, as well as the indifference of a big portion of the modern society to religion threaten once more the continuous work of the monasteries (Aggelopoulos, 1987, pp. 78-80).

By referring once again to the census table graph (Figure 4) from the research of Professors Mr. Kotzageorgis and Mr. Sidiropoulos (2019) we can see a decline of the Athonite population from 1951 to 2011, with a dramatic decrease of almost 1000 monks and workers between 1991 and 2011. From the beforementioned reasons this comes as no surprise, but it must be stated that in those years the monasteries were not pillaged from pirates nor were the focus of heavy taxation, conditions that threatened the monasteries' existence for most of their history.

The main threats to the monastic communities' general integrity as well as the monumental architecture of the said monasteries are, the dependance on imports and modern technologies, the decrease of population and further abandonment of many listed buildings and last but not least the threat of rising tourism. As said before, the monasteries imported wheat from fields that they owned outside the peninsula, by losing those properties they were stripped from a relevant self-sufficiency. The intrusion of technology in both production processing and power efficiency transformed, and one can say deformed, many of the interior spaces of various historic workshops as well as the exterior of some of the monasteries. All the while, an unparalleled rising tourism (Figure 28), when not regulated can disturb the monks' life as well as the threat of touristic appropriation of new restoration works, that may damage the image of the complexes.
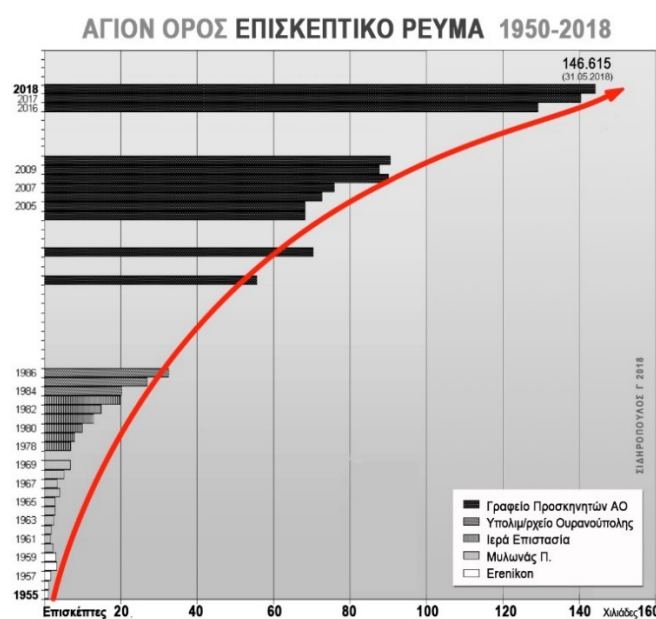

Figure 28: Graph that showcases the number of tourists per year, Horizontal Axis are the number of visitors in thousands while the Vertical Axis are the years from 1955 to 2018 (Kotzageorgis & Sidiropoulos, 2019, p. 134).

Even though these unprecedented to the monasteries' millennia long lifespan challenges threaten the future of the communities as well as the built environment itself, there is still remaining an attribute almost completely unchanged. That is the everyday life of the monk himself, the monk of the 2000's follows the same routine (with variations in some of the manual works) as the monk of the 1000's, this routine is inherited by tradition, from monastic generation to generation and is written to the monasteries' *Typika* and Codexies (Aggelopoulos, 1987, pp. 193-200). In conclusion, what is keeping the spirit of place intact is the dweller, in Mount Athos' case the dweller is the monk and the hermit.
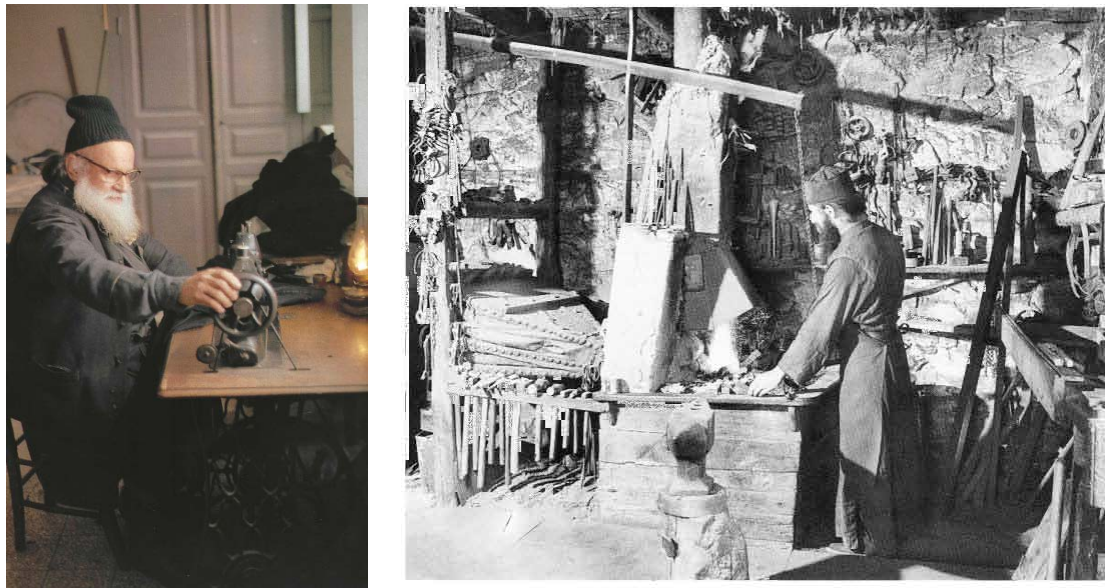

Figure 29: A monk weaving, in an old sewing machine (Left), Stathis Charitopoulos, photograph (Charitopoulos, 1995, p. 137), a monk smith in the monastery's workshop (Right), A. Smaragdis, photograph (Mamaloukos & Koufopoulos, Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997, p. 156)

Figure 30:Monks and fishermen preparing the fishing equipment in the Dochiariou Monastery (Charitopoulos, 1995, p. 157)

V.   Conclusion

To summarize, the Athonite peninsula had periods of prosperity, wealth and rise in monastic population, as well as acute decline in periods of pillages or heavy taxation. In those years an almost unique architecture style was developed, within its core was the already established byzantine monastic architecture of the Middle Ages, yet it was built and expanded upon continuously throughout the many years that followed. Even today many of the buildings of periods long gone are still standing and used, or if they were once destroyed, they then were reconstructed. Every single structure of the peninsula serves an important purpose; to sustain the monastic life and the monasteries themselves creating a circular economy of use and reuse. These, almost otherworldly attributes are today under threat from modernization, tourism and lack of interest in the monastic lifestyle.

After the research and creative comparison of the various architecture paradigms and their image throughout the centuries along with the study of the monastic life, answers the question of "How did those intricate constructions came to be?". The answer is the monks' dedication to tradition. Even if the construction techniques, the architectural styles and the years changed, the monks' dogma dictated everything that they should and must need, thus there was never a case for not repairing or reconstructing a damaged building that sheltered an important use, nor was a need to build something that did not had a purpose for sustaining their lifestyle. Exception, of course, were the cases when the population was declining and there were not hands or need to repair dwelling quarters or other parts of the monasteries. By today's standards these aspects of monastic thinking and action are considered as sustainable living, nature preserving through circular economy and limited harm to the environment, as both the way they built over and over again reusing natural materials, as well as having a strict diet with products mainly produced locally are the epitome of resilient and self-sufficiency.

Nevertheless, the abovementioned answer also gives birth to a new question, are those attributes still relevant today and what are the upcoming threats to the Athonite life? Truly, Mount Athos is seeing both a decline in its population (Figure 4), an enormous rise of religious tourism (Figure 28) and a steady loss in self-sufficiency production as to cover the nourishment of both monks, workers and visitors. Yet, huge donations from the private sector as well as European Union countered the decline of the built environment, especially after 1963, when the Athonite Monastic state celebrated its one thousand years of formal existence and the attention that this brought upon the mountainous peninsula (Aggelopoulos, 1987, p. 79).

To answer the above question providing a resolving proposal, Mount Athos will most likely continuous to decline, the main indicator is the decline of the population in time of peace, meanwhile even after huge sums of money are given for the rebuilt and conservation of the rich monasteries, many traditional exomonostatic buildings stopped operating during the 60's (Koufopoulos & Myrantheus, 1996), (Mamaloukos & Koufopoulos, Αγιορείτικη Μεταλλοτεχνία [Mount Athos Metalwork], 1997). Even if there is a religious interest and there are many tourists the future of the architecture landscape and the monastic lifestyle of the region is uncertain (Alexopoulos, 2013). A

counterattack to this steadily decaying International Heritage site is to bring in both the architectural community and the general public the sustainability and resilient attributes of the Monastic communities in the forefront, as well as the more measured lifestyle of the monks as a paradigm for a healthier psychological state of mind (Hatzifotis, 1995). Architectural student expeditions should be organized to research and study in situ the various buildings, many are yet to be mapped properly (Mamaloukos S. B., The Architecture of the Housing Spaces, the Preservation of supplies and Food and the Auxiliary Buildings of the Byzantine Monasteries , 2013, p. 66). Awareness will be raised for the newer generation of architects through these expeditions and will likely influence the future design prospects of similar like small communities.

The Athonite monastic communities had attracted many Western scholars, artists throughout the 18th and 19th century, and even in the 20th century Le Corbusier spoke highly about his experience and stay there during his trip in the Orient (Bogdanovic, 2015). Yet Mount Athos still remains in the obscurity while it can become once again a beacon of inspiration and knowledge, not in a religious sense, but as a living paradigm of sustainability, resilience and autarky.

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