

Athens Journal of Mediterranean Studies



Quarterly Academic Periodical, Volume 9, Issue 1, January 2023

URL: <https://www.athensjournals.gr/ajms> Email: journals@atiner.gr

e-ISSN: 2407-9480 DOI: 10.30958/ajms



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Athens Journal of Mediterranean Studies

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The Athens Journal of Mediterranean Studies

ISSN NUMBER: 2241-794X- DOI: 10.30958/ajms

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The current issue is the first of the ninth volume of the *Athens Journal of Mediterranean Studies (AJMS)*, published by the [Athens Institute for Education and Research](#).

Gregory T. Papanikos
President
ATINER



Athens Institute for Education and Research

A World Association of Academics and Researchers

16th Annual International Conference on Mediterranean Studies 3-6 April 2023, Athens, Greece

The [Center for European & Mediterranean Affairs](#) organizes the 16th Annual International Conference on Mediterranean Studies, 3-6 April 2023, Athens, Greece sponsored by the [Athens Journal of Mediterranean Studies](#). The aim of the conference is to bring together academics and researchers from all areas of Mediterranean Studies, such as history, arts, archaeology, philosophy, culture, sociology, politics, international relations, economics, business, sports, environment and ecology, etc. You may participate as stream leader, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (<https://www.atiner.gr/2023/FORM-MDT.doc>).

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Important Dates

- Abstract Submission: **5 December 2022**
- Submission of Paper: **21 February 2023**

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- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

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Important Dates

- Abstract Submission: **14 March 2023**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **15 May 2023**

Academic Member Responsible for the Conference

- **Dr. Yannis Stivachtis**, Director, [Center for European & Mediterranean Affairs](#) and Associate Professor, Jean Monnet Chair & Director of International Studies Program, Virginia Tech – Virginia Polytechnic Institute & State University, USA.

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A New Horizon? Assessing the Abraham Accords' Economic and Political Effect on Israel

*By Nellie Munin**

This article discusses the effect of the agreements known as the "Abraham Accords", concluded in 2020 between Israel and the United Arab Emirates (UAE), Morocco, Bahrein and Sudan, respectively. Specifying examples for regional cooperation that were impossible before the conclusion of these agreements, and analyzing the political and legal means taken, it illustrates how the agreements gradually change the political and economic equilibrium in the Mediterranean region, shifting the focus from negative to positive agenda, while mentioning future challenges for these alliances.

Keywords: *Abraham Accords, trade, regional cooperation*

Introduction

In 2020 Israel concluded four agreements, known as the "Abraham Accords", with four geographically distant partners: the United Arab Emirates (UAE), Bahrein, Morocco, and Sudan. The common denominator for these otherwise very different partners is their being Muslim countries, which previously avoided formal diplomatic relations with Israel, as an expression of support for the Palestinian people's position in their ongoing conflict with Israel.

These agreements were concluded within a short time, after rapid negotiations, sponsored by the United States under President Donald Trump's administration. Furthermore, the United States offered certain economic and security benefits to the parties, to encourage them to sign the agreements. (Guzansky and Feuer 2021).¹

The Abraham Accords were engineered to change the political and economic reality in the Eastern Mediterranean region, and indeed, already introduce some impressive results.

This article revisits the Abraham Accords some two years after their conclusion, to assess their economic and political effects. The first section examines whether and to what extent the legal framework chosen by the parties

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¹The UAE was interested in access to advanced American weapon systems. Bahrain was interested to improve its relations with the US to ensure support against the Iranian threat. Sudan was interested that the US remove its name from the State Sponsors of Terrorism list after twenty-seven years, and in an accompanying aid package of \$1 billion from the World Bank. Morocco wanted the US to formally recognize its sovereignty in the Western Sahara. Respectively, the agreements involve some US security interests such as their arms sales, Iran's hegemonic ambition in the region, and the agreements' implications on the Israeli-Palestinian regional conflict (Yussef 2021).

serves the goals of the agreements. The second section examines the economic collaboration facilitated by the agreements so far, and its future potential. The third section analyzes the political effect of the agreements, in the regional context. The fourth section concludes, suggesting an overall assessment of the agreements' effect.

The Legal Framework

Regional Agreements with Distant Partners

The term 'regional agreements' allegedly implies geographic proximity. Indeed, in the past, *regional* trade agreements were more common among geographically neighboring countries. The Abraham Accords and the following international trade agreements with their partners illustrate the global change of this perception in recent decades, emanating from the considerable improvement of global communication, transport, etc. as well as from the growing share of services (particularly through cross border supply)² in global trade.³

The United Arab Emirates is located at the Eastern end of the Arabian Peninsula, some 2,500 KM from Israel. *Morocco* is located in the Maghreb region of North Africa. It overlooks the Mediterranean Sea to the North and the Atlantic Ocean to the West. Its distance from Israel is 5,267 KM.⁴ *Bahrain* is an island country in Western Asia, located in the Persian Gulf. It is composed of 50 natural islands and 33 artificial islands. It is 1,905 KM far from Israel. *Sudan* is situated in the North of the Sahara, stretching from Western Afrika to Central Africa. It is 2,076 KM distant from Israel.

In political terms, this great distance between Israel and its partners proved an advantage that encouraged the agreements' conclusion, as discussed below.

Adjusting the Suit to the Client: Four Separate Agreements

The partners to the Abraham Accords differ considerably from one another.

²Goods are traded by cross border trade, while services are traded in four modes of supply (Art. I GATS): *cross border supply* (services cross borders while suppliers stay in the country of origin), *consumption abroad* (service consumers cross the border to consume the service), through *commercial presence* established in the host country, or by *presence of natural persons* (suppliers) in the host country where they supply the service.

³The WTO agreements GATT (Article XXIV) and GATS (Article V), acknowledging regional trade agreements, do not refer to geographic distance. In recent years regional trade agreements became a major engine for global trade enhancement, in light of the WTO's ongoing stagnation. (See details in: Pakpahan n.d.).

⁴Nevertheless, in European Union's eyes both countries belong to the Mediterranean region, which is subject to the Euro Mediterranean Partnership (European Commission 2022a) and UFM policy (UFM 2022).

Regime

The UAE is an elective monarchy, a federation composed of seven emirates. *Morocco* is a unitary semi-constitutional monarchy, with an elected parliament, where the king and prime minister lead the executive branch and the parliament has the legislative power. *Bahrain* is a constitutional monarchy headed by a king enjoying wide executive powers, including the appointment of a prime minister and parliament's upper house and dissolving its elected lower house. The regime in *Sudan* was replaced in 2019, following a military coup, with an 11 members Sovereignty Council and a civil prime minister. Future elections should determine its future regime. However, the different groups in Sudan do not seem to reach agreement about this future regime. This political paralysis drags Sudan into a dangerous position (Africanews 2022). Israel is a democracy, ruled by an elected government, headed by a prime minister. Its president holds a representative position.

Population

Two of Israel's four partners in the Abraham Accords are relatively big countries: *Moroccan* population consists of almost 38 million people (World Population Review, 2022) while *Sudan's* exceeds 45 million citizens (Worldometer 2022). The other two are considerably smaller: *The UAE's* population exceeds 10 million people,⁵ the closest of the four to Israel's population, exceeding 9 million citizens. *Bahrain's* population exceeds 1.78 million (Macro Trends 2022a).

Economic Profile

The economic profiles of these partners also differ considerably.

GDP per capita in 2021: UAE – 32,700\$, Morocco – 3,400\$, Sudan – 714\$, Bahrain – 20,410\$ (World Bank, 2020), Israel – 43,400\$ (Visualcapitalist 2022).

Unemployment rate: in the UAE before the COVID-19 crisis was low, 2.5-2.6%. In 2021 it reached 5% (Take-profit.Org 2022). In Morocco, it was 8-9% before the crisis (Trading Economics 2022) and now it exceeds 12% (CEIC 2022), in Bahrain – before the crisis, in 2019, it was very low: 1.56%. During the crisis, in 2020, it reached 4.09% (Macro Trends 2022b). In Sudan, the unemployment rate before the crisis, in 2019, was already high: 16.8%. It peaked at 17.7% during the crisis. In Israel, the unemployment rate has recently returned to its size before the COVID-19 hit, some 3% (Israeli Central Bureau of Statistics 2022a).

Inflation: In the UAE, the inflation rate at the beginning of 2022 was 2.5%, in Morocco – 3.2%, in Bahrain – 2.3% but it was considerably reduced to 0.6%, and in Sudan – 1.24% at the end of 2021, also considerably reduced from previous months (Trading Economics 2022). Nevertheless, Sudan is facing a severe macroeconomic crisis (Reliefweb 2022). In Israel, inflation in 2021 was 2.8% and

⁵8.92 million of the which are expats (GMI 2022).

is gradually rising. In August 2022 it has already passed 5% (Israeli Central Bureau of Statistics 2022b).⁶

In terms of economic status, out of 137 countries (Israel is not ranked), the UAE was ranked 14, Morocco 47, Bahrein 50, and Sudan 132. In terms of governance, the UAE was ranked 16, Morocco 69, Bahrein 109, and Sudan 118. (BTI Transformation Index 2022).

Economic Performance and Major Sectors

The UAE's economy is very competitive. It enjoys little bureaucracy, ranked 16 out of 190 economies in the Ease of Doing Business ranking (World Bank 2020, p. 16), enjoying 45% growth in a decade. Aiming at varied revenue resources, the UAE offers a comfortable business environment of low taxes, high incentives, and modern infrastructure, including some free trade zones where 100% foreign-owned businesses may operate, paying 0% taxes.

It is ranked high in all economic and business global parameters. Oil and gas form a major sector of its economy (source for some 25% of its GDP). In recent years it took efforts that turned it into the most diversified economy among the Middle East and North Africa (MENA) countries. Other important sectors of its economy include wholesale and retail (some 12.5% of GDP) tourism (12%), insurance, and finances (9%) (Peskin 2020).

Morocco is the fifth largest economy in Africa. The services sector accounts for over half of its GDP. One of the most important services sectors is tourism. Mining, construction, and manufacturing form an additional 25% of its GDP. Agriculture is another important sector, employing about 40% of the Moroccan workforce. Morocco enjoys the best infrastructure ranking in Africa and is striving to diversify its energy supplies, particularly with renewable resources, such as sun and wind. Morocco invests considerable efforts in establishing desalination plants, to fight the regional water scarcity.

In previous years, Bahrain was considered a very fast-growing economy, with petroleum production and processing being its major export product, followed by aluminum production. However, in recent years, even before the COVID-19 pandemic hit, its growth has been moderated. It depends heavily on food imports, and suffers from high unemployment rates, and the regional growing water scarcity.

Sudan – despite its great economic potential, the Sudanese economy is fragile, due to its political fragility. In terms of economic freedom, it is scored 174 in the world, the last of 47 sub-Saharan Africa region countries. In recent years it has experienced slow or negative growth. The secession of South Sudan cost it two-thirds of its oil revenue. Approximately half of its population is at or below the poverty line (Index of Economic Freedom 2022).

The considerable *economic differences* among the four partners may explain why it was decided to conclude four different bilateral agreements instead of one regional agreement, even though one multilateral agreement could have involved

⁶This unusual rise (compared to recent years) is part of a global phenomenon attributed to the effects of the Russia-Ukraine ongoing war.

less effort. This choice implies flexibility in the sense that the enhancement rhythm of each relationship depends on the bilateral will and priorities of the parties rather than on other parties which may have other agendas or priorities. This modular structure reduces the interdependence between the four agreements, ensuring that the agreements should not necessarily be adversely affected in case one of them fails. Indeed, the time that passed since their conclusion reflects different rhythms of advancement.

The separation between the four agreements also ensures maximal adaptation to their parties' needs and expectations, which may differ considerably due to their very different profiles.

Political sensitivities of the four partners may also partly explain this choice. Thus, for example, the political relationships between the UAE and Morocco, which was one of the supporters of the UAE's establishment in the 1970s, have escalated since the Gulf crisis in 2017, adversely affected also by the Yemen war and the crisis in Libya.

Furthermore, they may affect the agreements' performance. Thus, for example, *Morocco* experiences an ongoing dispute with Algeria over Western Sahara. This region is held by the Front Polisario, a national liberation movement representing the Sahrawi people in the resistance against the Moroccan occupation,⁷ which Morocco perceives as a dangerous terrorist power. Morocco detached its diplomatic relations with Algeria due to its alleged support of the Front Polisario.⁸ In addition, Morocco has an ongoing territorial dispute with Spain over Ceuta and Melilla. Morocco expects its political and economic allies to support its position in these disputes and its claim for the respective lands.⁹

Sudan suffers from decades of political instability and civil war, due to which some 6,400 Sudani citizens (Hotline 2022) escaped to Israel as refugees, asylum seekers, and illegal economic immigrants. One of Israel's interests in concluding the agreement with Sudan is to solve this issue. The ongoing political instability and constant regime changes make it difficult to turn that agreement into reality.

Framework Agreements

Due to the rapidness of the Abraham Accords' conclusion, they were engineered as framework agreements, to be followed by more specific agreements on the different aspects they cover. Such aspects of collaboration may involve

⁷The UN recognizes Polisario as a legitimate representative of the Sahrawi people and Western Sahara, a former Spanish colony, as a Non-Self-Governing Territory according to Article 73 of the UN Charter, where the Sahrawi people have the right for self-determination.

⁸Out of the four partners, Sudan and Bahrein have recognized Moroccan sovereignty over Western Sahara (Moroccan Ministry of Foreign Affairs 2020).

⁹Thus, for example, this dispute has been addressed by the European General Court and European Court of Justice (Case C-104/16 P Council v. Front Polisario). Front Polisario claimed that by *de facto* applying the EU-Morocco Liberalization Agreement amending their Association Agreement to Western Sahara the EU continues to encourage Morocco's economic domination in the region, thus undermining the right of the Sahrawi people for self-determination. The GC accepted this claim, which was later rejected by the CJEU, denying their standing. For implications see, e.g., Kube (2017), Frid de Vries (2018), Kassoti (2020).

trade, tourism, security, transportation, communication, technology, energy, finance, health, and global warming challenges. The agreements are also expected to facilitate indirect trade and economic collaboration with Arab countries with which Israel has no diplomatic relations.

The enhancement of economic relations between Israel and the four partners requires a network of deeper agreements, such as free trade area (FTA) agreements, removing barriers to trade in goods and services,¹⁰ bilateral investment agreements (BITS), ensuring that foreign direct investments and the fruits they yield would not be confiscated by the host country, treaties for the avoidance of double taxation that may be imposed on individuals or legal entities in their country of origin and the host country. In turn, such agreements pave the way to enhanced business cooperation between industries in all parties.

In the two years that have passed since the Abraham Accords' conclusion, some such specific agreements were already concluded between Israel and three of the four partners: UAE, Morocco, and Bahrain:

The UAE – in mid-2022 trade between the parties amounted to 1.214 billion \$ (Rosenman 2022). In April 2022 the parties initialed a free trade area agreement covering trade in goods and services, government procurement, and intellectual property rights (Lior and Eichner 2022). A treaty for the avoidance of double taxation was concluded between the parties in May 2021 (Israeli Ministry of Finance 2021) and a Bilateral Investment Treaty was initialed in October 2020 (Israeli Ministry of Finance 2020). Industrial agreements concluded between the parties include the selling of 22% holdings of Israeli Delek company in the gas field Tamar in the Mediterranean Sea to Mubadala Petroleum, owned by the Abu Dhabi government, a binding memorandum of understanding signed by the Trans-Israel pipeline company to transport Emirati oil from the Mediterranean to the Red Sea, collaboration between Israeli shipyards and DP World from Dubai to acquire Haifa Port as part of its privatization process. Israeli Aerospace Industries concluded an agreement with Etihad Airlines from Abu Dhabi to convert passenger planes to cargo configuration and announced cooperation with EDGE, a UAE advanced technologies group (Guzansky and Feuer 2021). A business collaboration agreement between the Israeli Manufacturers' Association and the Investment Development Agency in Dubai was concluded in April 2021 (Lior 2021).¹¹

Morocco – despite a little hesitant beginning, with an agreement that avoided mentioning embassies and ambassadors, noting for the mutual reopening of liaison offices, in December 2020 the Finance Ministries of both parties signed a collaboration agreement on finances and investments (Tzwick and Kahana 2020). In 2021 trade between the parties was estimated by the Israeli Ministry of Economy and Industry at 131 million \$. A mutual agreement for economic and trade cooperation was concluded between the parties in February 2022, aiming at

¹⁰Such barriers may be imposed directly, in the form of import duties or quotas, or indirectly, in the form of burdening regulation, administration etc.

¹¹Turkey's renewed interest in improving its relations with Israel and with the UAE could yield additional economic benefits to the parties (Guzansky and Lindenstrauss 2022).

increasing the mutual trade volume to 500 million \$ within five years. In August 2021 Israel and Morocco signed a cooperation agreement on Cyber protection.

As to industrial collaboration, in March 2022 the manufacturer's organizations of both parties concluded a cooperation agreement between them (Lior 2022). Direct commercial flights were launched, facilitating tourism between the parties. The Israeli Marom company acquired 30% of the Moroccan company Gaia Energy, advancing renewable energy projects. The EU is known for its criticizing position towards Morocco regarding the Western Sahara dispute and towards Israel, regarding its dispute with the Palestinians, denying economic benefits from these countries in attempt to change their political positions. Nevertheless, it seems to recognize the political potential of this new alliance, recently helping to enhance the bilateral cooperation between Israel and Morocco in the field of water (European Commission 2022b).

Bahrain – an agreement for economic cooperation between the parties was initialed in July 2021. In September 2022 negotiations on a bilateral free trade area agreement were initiated. In 2021 the trade between the parties amounted to 7.5 million \$ (Azulai 2022). Nevertheless, the Israeli Ministry of Economy and Industry assessed the trade potential between them in hundreds of millions of dollars. The major potential fields for collaboration may be health and medical equipment, agro-technology, water technologies, communication, building, and cyber technologies. The Bahraini developed financial sector could serve as a gate to Israeli companies interested in developing business in the Persian Gulf (Israeli Ministry of Economy and Industry 2021). In February 2022 the parties announced the negotiations' enhancement towards a bilateral investment treaty and a treaty for the avoidance of double taxation (Israeli Prime Minister's Office). The announcement mentions industrial collaboration agreements concluded between the parties, in fields such as medicine, water, alternative energy, agriculture, food safety, science, R&D, innovation, fin-tech, cyber, etc.

This temporary list reflects well the fact that relations with the UAE and Morocco advance faster than with the two other partners, and that the development of relations with Sudan is the slowest of the four (Guzansky and Feuer 2021). This fact is not surprising, since Sudan was the least keen partner of the four from the beginning, and some believe that it concluded the agreement with Israel only to satisfy the US. Its political instability and the severe macroeconomic crisis it suffers may be other reasons.

The Political Aspect

A New Formula for Peace

From the *political* aspect, the Abraham Accords offer an alternative to the old "peace for land" formula, which was perceived for many years as the only formula to solve the Israeli-Arab conflict. This old formula proved to be ineffective, dragging the entire area to ongoing hostilities rounds and stagnation (e.g., Schatz 2020). Nevertheless, the Palestinians and the international community, represented

by the United Nations or by major players such as the European Union, stuck to it as the only possible formula for a solution, thus indirectly contributing to the continuation of the dead-end and frustration in the region.

The Abraham Accords suggest a new, alternative formula of "peace for peace". This change of perception has been relatively easily accepted by their four Muslim partners since they do not share any land borders or land conflicts with Israel. They illustrate that such a formula may yield more productive results than the previous one, in a way that may inspire other countries in the region to adopt it, to enhance their own prosperity. In the meantime, the Palestinians do not join this initiative. Moreover, they feel betrayed by the Arab states involved, believing that the Arab states prefer to deprioritize the Palestinian problem and that the international community lost interest in solving it. This sense of growing frustration seems to serve as wind tail to extremists who support violent action to achieve the disputed land (Huberman 2022, Lynfield, 2022). Adopting an optimist perspective, one may hope that this is a short-term reaction, while in the long term, the Palestinians would acknowledge the benefits of this new formula and adhere to it. A pessimist perspective would stress that in the past the Palestinians sacrificed economic benefits to insist on their political agenda. Thus, only time will tell.

Changing the Regional Power Equilibrium

After two years, the Abraham Accords already seem to contribute to a changing equilibrium of powers in the region:

Relations with Israel's Peace Agreements' Partners: Egypt and Jordan, partners sharing land borders with Israel, concluded with it peace agreements in 1977 and 1994, respectively, but kept a cold peace with Israel. They are not parties to the Abraham Accords. Nevertheless, these accords and their following developments seem to trigger them towards more active collaboration with Israel, initiating regional projects for the mutual benefit of the regional citizens. Thus, last November Israel and Jordan concluded a framework agreement providing for a feasibility examination of a joint venture by which Israel will perform water desalination for Jordan in a plant built specifically for this purpose in Israel, while Jordan will produce for Israel solar energy from a plant built in Jordan specifically for this purpose, activated by a UAE company (connected to the UAE government) (Munin 2022). Recently, the king of Jordan offered the Israeli President another joint project: establishing a common food security storage (Kais 2022). Both participate in the EastMed initiative aimed at the dissemination of natural gas found by Israel in the Mediterranean Sea to Europe.

Turkey: a regional power that in recent years turned a cold shoulder towards Israel, is now making a political effort to enhance its economic and political cooperation with Israel, to enjoy the potential benefits of this new reality.¹²

¹²The growing collaboration between Israel, Greece and Cyprus in the EastMed gas pipeline project and in other project may have served as another trigger to this policy change (Harrari 2021). Turkey

Recently, during the Israeli President's visit to Turkey, the Turkish President Erdogan explicitly expressed interest in joining the regional gas venture.

One symbolic illustration of the changing atmosphere in the region was the Negev Summit hosted by Israel, in which the Gulf countries, Egypt and Morocco participated, side by side with the US. This summit emphasized Iran-related issues and is not seen as very productive in effective terms. Critics also mention that Jordan and the Palestinian Authority did not attend the summit. However, its declarative and symbolic meaning in terms of regional atmosphere cannot be denied (Kurtz 2022).

Overall Effectiveness Assessment

On the one hand, the Abraham Accords improved Israel's legitimacy in the Arab world: Israel was both recognized by its partners in these agreements and by other Arab countries in the region, which actively (e.g., Jordan, Egypt, and Saudi Arabia which opened its skies to Israeli airplanes) or passively (e.g., Oman) support these agreements. On the other hand, the agreements encouraged Israel's willingness to enhance its link to the Mediterranean region, supported by improving the administrative layout necessary to facilitate this aim (Zaga 2021), a policy which is well reflected by the recent regional collaborations addressed in this article, and others.

Israel's Trade Diversification and Trade Diversion from the European Union

The EU is Israel's major trade partner. Trade between Israel and the EU encompasses roughly one-third of all of Israel's external trade. To avoid this great economic dependence, used by the EU as leverage for political dictation to Israel, in recent years Israel tries to diversify its trade partners (Munin 2021). Before the Abraham Accords' conclusion, Israel focused its efforts on East Asia. The Abraham Accords opened new horizons. This may be another explanation for the rapid realization of their potential.

The "Honey Trap" Effect

In an article I published a short while after the conclusion of the Abraham Accords, I suggested that the benefits of the Abraham Accords may turn into a "honey trap" for Israel, leveraging the growing interdependence among the economies involved to affect Israel's political position towards the Israeli-Palestinian conflict¹³ (similarly to the European Union's approach) (Munin 2020).

is also improving its relations with the Gulf countries and other Arab countries (Guzansky and Lindenstrauss 2022).

¹³Thus, for example, Zaga (2021) notifies several new aspects of potential political interference by the Abraham Accords' partners: demand from Israel to stop disputed territories' annexation, subjecting the parties' relations with Israel to its treatment of the Palestinians, subjecting the

While the total trade volume between Israel and its four partners to the Abraham Accords does not raise this concern yet, some of the specific agreements mentioned already create substantial inter-dependence in strategic industries. Thus, for example, the holding of 22% of a major Israeli gas reserve by an Abu Dhabi government company, the growing dependence of Israeli civil aviation services on the open sky policy of its new partners, which considerably shortens any travel to the East, and joint ventures in strategic fields such as a major port acquisition may be of future concern, subject to the interest of the Abraham Accords partners to activate this potential leverage (Zaga 2021).

Conclusion

Two years after their conclusion the Abraham Accords may be regarded as a success and a regional groundbreaking move, both politically and economically, at least with regard to its partners. Their successful application seems to trigger other regional partners to embark on board the projects at stake, although – in the meantime – not the Palestinians. Despite the strategic risks mentioned, the Russia-Ukraine war and the Iranian threat reinforce the importance of regional collaboration among the Mediterranean partners, which strengthens them against potential economic and political threats, through the synergy of their respective comparative advantages. The Abraham Accords seem to enhance this partnership, creating synergy between old and new collaborations.

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agreements' benefits to Israel's approach towards the Palestinians, playing an active political role in delivering and facilitating political initiatives (e.g., by the US) in the region.

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Greek Words in Maltese Harbour Toponymy

*By John Vella**

The study presents place names and site names (toponyms) found in the Maltese islands and which comprise Greek words or have origins in the Greek language. With a focus on maritime connections, it presents historic events which would have brought harbour communities in close encounter with the Greek language and culture. Through a multidisciplinary approach the study analyses placenames and site names still used or found in historical documents, backed by archaeological evidence, oral tradition, cartography, other knowledge, and studies. Findings show that in the Maltese islands, placenames mirroring or containing Greek words occur at sea inlets and creeks which could have served as harbours; however, the occurrence of both place names and site names is higher in the south of Malta and around its ancient harbour, witnessing to higher contacts between the two cultures. The study concludes that connections between the Maltese islands and the Greek cultures happened mostly in maritime harbours owing to events in history which gave importance to the use of the Greek language or Greek maritime terminology.

Keywords: *Greek, harbour, Malta, maritime, Mediterranean, toponyms*

Introduction

The debate about the colonisation of the Maltese Islands by the Greeks has for long been a matter of debate in Maltese historiography. Although history was kept as a reference to this study it presents historical events as circumstances which would have led the Maltese to adopt Greek words for places and sites on the Maltese Islands. The study presents a number of placenames (toponyms) and site names found in the Maltese islands which appear to have a maritime connection, and which comprise Greek words or have their origins in the Greek language. By focusing on the maritime activities and connections which could have arisen from them, the study presents historic events which would have brought Maltese communities or mostly harbour communities in close encounters with the Greek language and culture.

Most of the connections or circumstances which would have brought Greek people, language and culture to the central Mediterranean were wanderings and travel forced by events in different parts of the Levant or the east Mediterranean basin. Following such was navigation, to explore and exploit the opportunities presented at other lands and areas of the Mediterranean Sea, amongst which the central Mediterranean and their crossroad islands: the Maltese islands. These include travel for reasons of commerce and maritime activities.

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The search for evidence and material sustaining the discussion were found among classical publications, historical documents, archaeological artefacts and finds, oral tradition, cartography, knowledge across different disciplines and scholarly studies. The study shows that more than a matter of colonisation Greek influence and presence in Malta left its mark at places of frequent interactions between the two cultures. These were particularly possible at Maltese harbours and harbour areas facing north-east to the Greek islands and mainland, with the exception of the Gozitan inlet which faces west.

Literature Review

Connections between the Maltese and Greek cultures started early.¹ Evidence for contact may also be observed through similarities found in megalithic age artefacts and architectural features produced by the two cultures (Sagona 2015, p. 90, Vella 1995). As people met, they shared ideas and knowledge which helped produce identical or quasi-identical artefacts, structures and practices. As people travelled and as others started sailing the seas, the possibility of movement of artefacts between cultures was facilitated. The presence of pottery from Greek cultures in Malta is an example of how they could have, intentionally or by chance, met. Although there is no evidence of the language being used on the Maltese Islands in the megalithic age, similarities in artefacts, built structures, ritualistic art, statues and statuettes could tell about their contacts. Remnants from the Bronze Age and authors of Classical Antiquity demonstrate that the Maltese Islands experienced more arrivals and settling of communities from different parts of the Mediterranean, amongst which Greeks.

Classical Greek authors and geographers like Homer (Homer 1919, I: 85), Strabo (Hamilton and Falconer 1854, Book V, Ch. 3, Strabo and Meineke 1877, Book 17 Ch 3, verses 57–8),² and Ptolemy (Nobbe 1843, Book IV, Ch 4. Greek text: Book IV, Ch 4, 246), mentioned Maltese lands in epic poetry (Vella 2017a, pp. 51, 55, 58, 61, 62, 65 and 66), historiographic and geographic works intended to inform travellers and navigators about the Mediterranean (Vella 2022, p. 5). The earliest contacts with the Greek culture are documented as far as the Bronze Age (Vella 2017a, pp. 50–51). Homer's *Odyssey*, as a record of oral history, narrates that Ulysses (Odysseus), shipwrecked on Maltese lands, was taken by Calypso to fetch tools and wood to build a boat and return home (Vella 2017a, p. 53). Homer tells that in the southern part of Ogygia was a maritime community able to provide such craftsmanship, necessities and services (Vella 2017a, p. 53).³ Considering that at the time the sea-level was lower and the Maltese archipelago formed one large island (Vella 2017a, p. 51, Micallef et al. 2013, pp. 129–147), those who

¹By *Greek cultures* the author includes cultures which developed on the mainland and the islands such as Crete (ex. Minoan), the Ionian, Aegean, and Cycladean islands.

²Quote from Strabo: 'ἔστι δὲ καὶ Μελίτη νῆσος ἐν πεντακοσίοις σταδίοις ἀπὸ τῆς Κοσσούρου' (Translation: 'Melite, an island, is 500 stadia distant from Cossuros.')

³Quote from Homer's *Odyssey* Od. 5. 237–38: "ἤρχε δ' ὁδοῖο νήσου ἐπ' ἐσχατιῆς," Hom. Author's note: The detail of Ogygia being an island is important to date the *Odyssey*.

came into contact with Ulysses and other Greeks navigating Maltese waters were well aware of each other's presence. Once the sea rose and flooded the valleys now forming the Malta Grand Harbour, such maritime communities moved altogether or in their majority to transform newly formed sheltered creeks into well-equipped harbours with resources and services necessary for daily port activities (Vella 2022, p. 21, Micallef et al. 2013, pp. 129–147). Such destination harbours became known to different peoples and cultures, who called them with different names, tried to interpret them in their own language or assimilated them phonetically to names accommodating their understandings. Considering that since time immemorial the Maltese Islands came into contact with a myriad of Mediterranean and non-Mediterranean cultures, it is anticipated that in one way or another Maltese communities absorbed and learned from all to enrich their own culture, and language with new vocabulary through the ages.

Maltese language, which Vella maintains, is a distinctive language coming from NorthWest Semitic languages (Vella 2017b), had for centuries enriched itself with vocabulary coming from the classical languages Greek, Latin and Arabic (Luttrell 1975, p. 24, Aquilina 1976, p. 23, Mifsud 1995, pp. 20, 23, 49 and 228), and the different European languages it came into contact with through colonisation, commerce, education, religion, tourism and lately the media.

Malta and the Greeks

The Canaanites, whom Greeks, and consequently Maltese, call with the exonym Φοινίκη (*Phoinikē*) and Fenici (Crawley Quinn 2017), reached Maltese lands in c.1200 BC, paving the way to a trading colony (Vella 2017a, pp. 51, 54 and 54 footnote 32). Considering that the Phoenicians reached Maltese lands from a distance twice or more that from Greek lands, then Greek peoples would have reached Maltese lands earlier than the Phoenicians (Vella 2017a, pp. 51 and 61),⁴ but not colonise them for trade or warfare. It was by the mid-eighth century BC, after the Phoenicians strengthened their presence in Malta that the Greeks started setting up colonies in Sicily.

As a record of oral history, Homer's *Odyssey* confirms that the Greeks knew Maltese lands centuries before the changes in sea-level (in c.1000-900 BC), but by Homer's age they could not recognize the coastal landscape or find earlier settlements which were by then submerged (Lambeck et al. 2006, Micallef et al. 2013, pp. 129–147, Vella 2017a, pp. 51 and 61). In Malta changes in sea-level left consequences and communities dedicated to maritime activity or living on the coast had to move inland and restart at newly formed creeks and inlets (Vella 2017a, pp. 51 and 61, Vella 2022, p. 21). An example of changes after the flooding, which Vella (2021) calls the second phase of the Phoenician era (post c.1000-900 BC) in Malta (Vella 2022, p. 21), is the Bormla harbour which transformed into Malta's main commercial harbour equipped with craftsmanship, services, shipbuilding and repair facilities, which developed according to the

⁴Much of the questions in this area could be resolved by an identification and study of ruins and structures existing on the ancient Maltese coastline. Such a survey could be aided by the use of seabed-scanning technology followed by closer observation as underwater archaeology.

necessities of rulers and commerce in the Mediterranean (Vella 2022). Malta became a port of call (Bonanno 2005, pp. 20, 56, 57 and 202, Vella 2022, pp. 5 and 7) and Greek presence would have been high for commerce and other purposes even during the Phoenician colonisation of the islands. The Greeks' stronger presence in Sicily made the Maltese Islands less important for them once commerce and peaceful navigation were not disrupted.

Destination Identification

Evidence to the Greek peoples' knowledge about the Maltese islands are also names with which they identified them. Once the memory of Ogygia was relegated to the past, Greek navigators identified the Maltese Islands in a way they understood and articulated. They identified them as, Melite, Gaulos or Gaudos (Sagona 2015, p. 174, Ciantar 1772, pp. 370–371), and Ephaestia (Ἠφαιστεία); or Hephaestia (Graevius 1725, Caruana 1882, p. 2).⁵ Some also attributed the toponym Hyperia for one of the Maltese islands away from Sicily (MacBean 1773, see *Hyperia*). Malta, as Μελίτη (Melite) was adopted by the Greeks from the *mlt* used by the Phoenicians for its destination harbour (Tempio 2008, pp. 121–122; Vella 2022, pp. 20, 29 and 31).⁶

Distinctive toponyms survived through vernacular language and oral lore of common people until they were recorded in writing (Vella 2022, pp. 12–13, Vella 2017a, pp. 49–50, 51 and 66). It is acknowledged that Greek authors used or translated Phoenician texts by either changing the placenames to a new Greek name meaning the same thing as in Phoenician (semantic translation) (Demetriou 2012, p. 20) or else tried to imitate as much as possible the phonetic sound of the original (literal translation/phonetic transliteration) (Mheallaigh 2013, p. 203, Whitmarsh 2011, p. 88, Bernal 2020). The *mlt*, which became Malta (Cornelii 1627, p. 349),⁷ and Melite/Melita for Greek and Latin authors (Angelus 1401–1427, p. 156, Strabo 1829, p. 42, Strabo and Meineke 1877, KJBV Acts 28:1),⁸ is interpreted as deriving from the Phoenician 'maleth' meaning 'καταφύγιο / καταφύγη' (Bres 1816, p. 47; Busuttill 1971, p. 305; Bekker et al. 1888–1890, Vol 1–2, Book V, Chapter 12 Sections 1–4; Liddell and Scott, 1901, p. 780): a place of shelter, refuge, port or haven (Bres 1816, pp. 46–47, Ring et al. 1994, pp. 412–413, McKendrick 1968, p. 105, La Revue Maritime 1956, p. 320, Danver 2010, p. 163). Vella (2022, pp. 6 and 20) maintains that the Malta toponym has roots in Semitic languages as Phoenician and would have been 'malath' (Bres 1816, p. 47). His analysis of the harbour city toponym maintains that the toponym Bormla results from the addition of the Arabic word for harbour 'bur' to the Phoenician 'malath' or vernacular 'mlat/mlath' (Vella 2022, pp. 20–21). Confirmation of such a phenomenon, where an Arab word is later added to an earlier toponymic word, is

⁵In Abela GF see column 93, under section titled 'De parva Insula Hephaestia, hodie Comino - Notitia Undecima' (About the small island of Hephaestia, today Comino – Eleventh News).

⁶Referring also to the later Arabic مَلَاذ (malād) meaning refuge, shelter in English, and *kenn* in Maltese discussed in Vella (2022).

⁷Quote: 'vulgo Malta dicta' (popularly known as Malta).

⁸The Bibliothèque nationale of France dates Angelus's life between 1360 and 1410.

observed in other Maltese harbour toponyms described in this study.

Naming a destination harbour implies that the Greeks or those writing in Greek included the islands on maritime routes as they saw their importance. It was the founding (c.814 BC) and rise of Carthage (post-650 BC) as a maritime military power that compromised the peaceful presence of Punic and Greek people and their growth of trade and calls in Malta (Bonanno 2005, p. 103). The concentration of people near harbour areas forming large towns is maintained by both Bonanno (2005, p. 115) and Vella (2022, p. 7), hence strengthening the argument that during the Phoenicio-Punic period (c.1200 - 218 BC) and mostly in peaceful times people aggregated also nearer to the sea at sheltered and other manageable inlets.

Scilace of Carianda (known as Skylax or Scylax) a Greek navigator, geographer and cartographer, living between 516 BC and the mid-5th century BC, provided the oldest geography book known to survive till present. He described the Maltese islands as inhabited by Carthaginians adding distances, and

“Μελίτη πόλις και λιμην, Γαυλος πολις [...]”

Melita urbs cum portu, Gaulus urbs, [...]. (Gronovio 1697, p. 118, Müller 1855, p. 89, Caruana 1899, p. 206)

[Melita city/town and harbour, Gaulus city/town, [...]”]⁹

From the sixth century BC, Carthage supported by the Etruscans waged wars with the Greeks in Sicily, and Malta’s ancient harbour and sheltered creeks would have served as temporary ports for Carthaginian vessels defending the Island or preparing attacks on Greek harbours in Sicily (Bonanno 2005, pp. 73–75). Such turbulent times would have seen less Greek vessels approaching harbour (Bonanno 2005, p. 73). In spite of wars the Carthaginians left a little less than two thousand soldiers to protect the island of Malta (Livii 1548, p. 68), showing that they attributed less military importance to the island of Malta at the time (Bonanno 2005, p. 115). Consequently, surrender to the Romans by the garrison commander would nonetheless be deemed as a wise decision to save lives, even if they ended up imprisoned and sold as slaves (Livii 1548, p. 68).¹⁰

During the Carthaginian period, Lycophron (330-325 BC) and Callimachus (c.310-c.240 BC) mentioned the Maltese islands as places where Greeks settled or stayed for some time (Lycophron 1921, pp. 1027–1033, Callimachus 1921, Bonanno 2005, p. 7). This implies that prior to the Punic Wars with Rome, some small Greek communities resided in the Maltese Islands. Trade and travel by

⁹The word *και* translates to *et* (and) in Latin not *cum* (with) as presented by Gronovio (1697).

¹⁰Quote: “A Lilybaeo, COS. Hierone cum classe regia dimisso, relictoque; praetore ad tuendam Siciliae oram ipse in insulam Melita, quae a Carthaginiensibus tenebatur, traiecit. Advenienti Amilcar Gisgonis filius praefectus praesidii cum paulo minus duobus millibus militum, oppidumque, cuius insula, traditur. Inde post paucos dies reditum Lilybaeum: captivique; et a consule et a praetore, praeter insignes nobilitate viros, sub corona venierunt.”

Translation: “From Lilybaeus, COS. Hiero having disbanded the royal fleet, and left; he himself crossed over to the island of Malta, which was held by the Carthaginians, to the defense of Sicily. On his arrival Amilcar the son of Gisgo, the commander of the garrison, with a little less than two thousand soldiers, and the town of which island is reported. Thence after a few days' return to Lilybaeum; and the prisoners; were sold under the crown both by the consul and the praetor, in addition to distinguished men of nobility.”

Greek vessels could have been disrupted by the Punic Wars (264-218 BC) and restored once Carthage lost Sicily and the Maltese Islands to the Roman Empire in 218 BC (Bonanno 2005, pp. 76 and 123); permitting Greek merchants and travellers navigating Maltese waters to meet and mingle more with locals and others who stayed there. It also led the Maltese culture, influenced by Phoenician culture, to experience more the use of Greek. Examples of such a practice come from inscriptions found on the second century BC Cippi of Melqart-Herakles (Bonanno and Militello 2008, pp. 20, 105, 116–118, Crawley Quinn and Vella 2014, p. 233),¹¹ coins (Bonanno 2005, pp. 25, 35–36), and a bronze tablet dated to the third and second century BC or later, when the Maltese Islands were already under Roman rule (Bonanno 2005, pp. 25 and 81).

Although Greek was used among the highly educated Roman society and administrative circles, it is unknown whether it was used by Roman citizens who resided or frequented the Maltese Islands. The common people continued to use their own vernacular and enriched their language with vocabulary from languages, even of non-Semitic origin like Greek and Latin, they came into frequent contact with. The absence of written Maltese could be attributed to common Semitic roots it enjoyed with Phoenician, permitting easy understanding between the two. The fact that locals did not speak Greek or Latin (KJBV Acts 28: 2),¹² however, does not imply that none were able to communicate with either Greek or Latin speakers they met. Knowledge to communicate with different languages was particularly possible in harbour areas and among communities where people from different countries met on a daily basis.

Coins Which Speak

Besides archaeological finds carved in stone or pottery, coins show that between the late 3rd century and second century BC (Sagona 2015, p. 175), the Phoenicio-Punic community on Malta tried to show its superiority on the island by minting coins with the *ANN'NN* toponym, but contemporarily, in the second century BC, the Greek or Graeco-Romans minted coins with *MEAITAIQN* (Melitaion) (Sagona 2002, Bonanno 2005, pp. 25, 86, 142, 155–160, 253, and 268–269, Bonanno and Militello 2008, pp. 139–140), possibly indicating superiority in the harbour area favoured by its becoming a Roman port-of-call (Vella 2022, pp. 5, 20–21). It appears that the Punic dream of dominating the islands faded away as Carthage lost the islands (218 BC) and was consequently destroyed in 146 BC. This led the Greeks or Graeco-Romans in the 1st century BC to also mint coins for Gozo with *ΓΑΥΛΙΤΩΝ* (*Gauliton*), which enjoyed a better status with Rome (Bonanno 2005, pp. 36–37):¹³ perhaps taking opportunities

¹¹ A Cippus is at the National Museum of Archaeology, Valletta, Malta while a second one is at the Louvre, Paris, France.

¹² In *KJBV Acts of the Apostles*, Chapter 28, verse 2, Luke calls them ‘οι δε βάρβαροι’ and the barbarians’, a phrase repeated in Stephens’s 1550 Textus Receptus, Scrivener’s 1894 Textus Receptus, the Byzantine majority of Bible versions, the King James Bible Version, the American Standard Version, the Noah Webster Bible and the Darby’s English Translation.

¹³ See the description and image in Bonanno (2005, pp. 36–37).

arisen from the loss of support from Carthage to the Punic people still living on the Maltese islands.

From what Lycophron and Callimachus (c. 330 - 240 BC) wrote, it is difficult to state whether the Greeks established themselves as a colony in the Maltese islands by the third century BC, in between the Punic and Roman transition of power, or even later with the blessings of the Roman Empire. The minting of coins with Greek script would however explain that Greek presence and language were gaining importance. Putting the name of a place such as a destination harbour (Melitaion) on coins was a clear attempt to show presence, superiority and authority, even if the Romans ruled the Maltese Islands. It was a way to show distinction from the Punic cultured communities and authorities still influential among the population. Distinction between Graeco-Roman authorities using the toponym of the destination harbour Melite/Melita (MLT) respectively, and the Phoenicio-Punic using ANN (aynuna) for the whole island, especially on coins, as a symbol of power and trading tool, were significant. Behind striking coins for use on Maltese, and consequently Gozitan territory, during the same period, was a valid motive.

If it were not for colonizing the Maltese archipelago or parts of it politically or militarily, the coinage would have been used to strengthen and dominate commercial activity which, with the arrival of further opportunities born out of the expanding Roman Empire, was booming at ports of call (Sagona 2015, p. 222). Such activity would have made the harbour, as a Roman port of call, important to maritime and commercial activity growing in the first centuries of Roman domination. This would have led to its identification in Greek and Latin authored works causing the destination harbour toponym to become the name of the town and then the island, subsequently eradicating the Punic toponym ('NN) for the island of Malta. If this was so, then it may indicate that the Greeks could have 'colonised' the destination harbour and its activity in a commercial manner, permitting and facilitating Greek navigators and travellers to reach Malta, trade, and even settle there. The decline of the Punic power at sea added to this would have made the harbour a vibrant cosmopolitan site with Greeks, Phoenicians, Carthaginians, Romans and Maltese living and working together, and interacting with others who reached the harbour for some reason. The usefulness of the Maltese harbours during the Roman era, is observed by classical authors and geographers of the first century BC to the second century AD like Strabo (Strabo 1856, Book 17, Chapter 3, verses 57–58, Strabo 1903) Pliny (Pliny the Elder 1855, Book 3, Chapter 14 (8)), Diodorus Siculus (Oldfather 1939), Ptolemy (Nobbe 1843, Book IV, Ch 4, 246) and the *Itinerarium Antonini Augusti* (Pius 1735, pp. 518 and 520).

In the first century BC, Diodorus wrote

καὶ πρώτη μὲν ἐστὶν ἡ προσαγορευομένη Μελίτη, [...], καὶ λιμένας μὲν ἔχει πολλοὺς καὶ διαφόρους ταῖς εὐχρηστίας, [...].
 'The first one is that called Melitê [Malta], ... it possesses many harbours which offer exceptional advantages'

And

μετὰ δὲ ταύτην τὴν νῆσον ἔστιν ἑτέρα τὴν μὲν προσηγορίαν ἔχουσα Γαῦλος, πελαγία δὲ καὶ λιμέσιν εὐκαίροις κεκοσμημένη, Φοινίκων ἄποικος.

After this island there is a second which bears the name of Gaulus, lying out in the open sea and adorned with well-situated harbours, a Phoenician colony. (Oldfather 1939)¹⁴

Diodorus even as a historian pointed out the importance of harbours or creeks where navigators could seek shelter from the open seas especially during rough weather. Consequently, seeking the Greek influence through harbours was a natural choice to start with as a focus for this study.

Methodology

The study starts by identifying and analysing historical circumstances and events which could have connected the Maltese and the Greek cultures. It used evidence from historical documents starting from antiquity and classical times, archaeology, documents found in public or institutional records like notarial archives, church records, historical publications, travelogues and others intended for navigation, and language. Language as a source of contact was also used in archaeological artefacts, in official records, poetry, cartography and geographic works. The focus was mostly on toponyms (placenames) and site names at Maltese maritime harbours having a Greek word in them or which are of Greek origin.

After mentioning and analysing briefly the toponyms found in Malta and Gozo, the focus turns to that of Malta's ancient harbour, Bormla, where shipbuilding and repair activities can be traced back to medieval, classical and ancient times (Vella 2022). An analysis of each occurrence is presented and briefly discussed. From the findings the study concluded that the harbour indicated as the most influenced by the Greek culture is the ancient destination harbour of Bormla where most linguistic evidence can be traced through written documents, strengthening the veracity of research and oral lore in the absence of evidence destroyed by time and development. The Maltese placenames and site names discussed are in alphabetic order: Bullumeni, Gaulos and Gaudos, Melite (Malta), Mandra, Marsa, Marsaskala, Qormi, and Xlendi. Other words connected to harbours or the maritime are listed in a Table.

¹⁴The Greek text is in Diodorus Siculus, *Diodori Bibliotheca Historica*, edited by Bekker, Dindorf and Vogel, liber V, chapter 12, sections 1–4.

Findings and Discussion

Destination Gains Priority

Destination harbours as ports of call were most likely to receive attention from authors of works intended to inform travellers and navigators. Their activity helped them become cosmopolitan places receiving knowledge and cultural influences which grew stronger and lasting when people came into frequent contact with each other. It is the coming together of Maltese and Greek cultures that forms the basis of this historical study discussing Greek words found in Maltese harbour toponymy.

If through navigation and in search of new lands for habitation, the Greeks discovered and reached Maltese lands in the Bronze Age, they would have used names to identify them. By calling the whole Maltese landmass Ogygia (locally called *Ggantija*), Homer showed that the Greeks had for long been aware of Maltese lands even if by his time Ogygia became only a memory narrated through oral lore (Vella 2017a, pp. 51, 55, 58, 61, 62, 65 and 66). After Homer's times (late eighth or early seventh century BC) (Croally and Hyde 2011), p. 26), the Greek toponym *Melite* is first recorded in the sixth century BC by Xenophanes of Colophon to describe sea fossils found on the islands (Karsten 1830, pp. 178–179). If Xenophanes visited during his life time, he would have reached the Maltese Islands during the Phoenician colonisation, suggesting that Greek vessels kept reaching Malta. Vella maintains that the toponym *Melite* and *Melita* used by classical authors writing in Greek and Latin respectively, derived from the Phoenician MLT (maleth/malath/mlat) used as toponym of the destination harbour not of the Island which the Phoenicians identified as ANN (Vella 2022, p. 20). A practice still common among maritime people is that they used and still use the name of harbours as points of departure and arrival for navigation. This explains why classical authors, geographers and nautical works referred to the destination's island, its city and its harbour as Melite or Melita. It is through navigation that the Melite (Lat. Melita) toponym would have become popular among those sailing the Mediterranean. While the MLT was an endonym used by locals and Phoenicians for the ancient harbour, Melite was an exonym by which Greek, and consequently Latin authors, assimilated the Semitic MLT, making the destination or port of call Melite/Melita known throughout the whole of Classical antiquity.

Consequently, the use of Melite/Melita for the whole island was facilitated as the Roman and Latin world promoted what it inherited from the Greek culture and set aside those which they considered as inferior cultures and languages. While the two cultures intended to make their toponym endure the ages and circumstances by minting coins with the toponym of their choice, the Roman world followed by the Byzantines succeeded to minimise and silence the use and recognition of the Phoenician toponym ANN.

Medieval Era

Greek and Roman (Latin) interpretation of placenames did not always reflect or articulate placenames the same way which locals did in their vernacular language. Phonetics found in Greek and Latin could not assimilate or reproduce phonetics found in, for example, Semitic vocabulary and placenames. In maritime usage, however, ruling cultures and locals had frequently come closer by adopting common vocabulary understood by both sides or else conjoined or combined words found in local vernacular and the language used by the ruling authorities. Examples of such an occurrence in Malta, presented in this study, lead back to the medieval era and survive to this day. The composition of these toponyms tells a history which is not documented in writing as none or rarely do narratives of history or subjective historiographers tell how a toponym came into being. Toponyms, from a historian's perspective, can nevertheless tell their own history (Vella 2022, pp. 4 and 21).

Stand Alone Greek Toponyms

Among the toponyms which stand alone as being a single word of Greek derivation are the toponyms applied to Malta and Gozo, by classical authors, that is Melite for Malta, Gaulos or Gaudos for Gozo (Strabo 1856: book 17, chapter 3, verses 57–58, Vella 2012, p. 5), and that of Haephestia applied to Comino (Graevius 1725),¹⁵ the smaller island in between them. The derivation of Melite was discussed earlier in this study, and accepted as a phonetic transliteration of the Phoenician MLT (maleth/malath/mlat). Gaulos for Gozo was considered as the Greek interpretation of GWL or Gawl, which refers to the *gauloi*:¹⁶ “a round-built Phoenician merchant vessel” (Vella 2012, p. 5, Hartley 2004), and which consequently led to the mention of Gauliton on coins. Gaudos, as recorded by Strabo (Strabo 1924, pp. 103–104 and 193–195: Book VI, Ch II, 11 and Book VII, Ch III: 6) is however a closer phonetic transliteration of the vernacular toponym Għawdex. Considering the Gaulos's link to a maritime vessel, there stands out another toponym connected to a Greek maritime vessel in the island of Gozo. It is the toponym of the once fishing hamlet called Xlendi. Xlendi took its name from the early eighth century Byzantine galley warship called *Chelandion* (Greek: χελάνδιον) (Pryor and Jeffreys 2006, pp. 166–169), which the Arabs later called *shalandī* and which in Maltese vernacular is Xlendi (shlen-dee) (Pryor and Jeffreys 2006, p. xlvi–xlvii, 168–169, 190, Agius 2001, p. 55). The Gozitan inlet of Xlendi is the only inlet facing west among the inlets mentioned in this study. Since the Greeks had established Neápolis (Νεάπολις, now Nabeul, Tunisia) in the fifth century BC, it is assumed that Xlendi would have been the inlet frequented by Greeks ever since the establishment of the colony and which would have survived up to the Byzantine period.

¹⁵About Comino, Graevius (Vol. 45, 1725) referred to the original text by Abela (1647).

¹⁶The Mariners' Museum and Park, The Ages of Exploration, Phoenician Ships: <https://exploration.marinersmuseum.org/watercraft/phoenician-ships/>.

Qormi and Marsa

Qormi is the toponym of an ancient village in the island of Malta. It stands at what was the innermost reach of the Grand Harbour waters and only round 5.8 kilometres away from the capital Mdina. Vella (HCR 2012) maintained that the toponym Qormi derives from the Greek word ὄρμιοι (hormos / hormoi) which means anchorage (Vella 2012, p. 3). The noun ὄρμος (órmos) in Greek also means inlet, bay and moorage, in a plural form,¹⁷ thus indicative of many moorings and anchorage possibilities existing in that part of the sea inlet back in time. Such use of the place are remains of warehouses used prior to the 5th and 6th century AD during the pre-Byzantine era (Gambin 2004, p. 118, Gambin 2005, pp. 49–54). It seems that between the 6th century and the arrival of the Arabs in AD 870, the shallow waters which permitted sea-going vessels to reach the shores of Qormi changed due to siltation coming down the valleys from higher land and owing to a lowering of sea-level (Sivan et al. 2004, pp. 324, 325 and 328) which turned the site into a large area of shallow marshlands. By the sixteenth century, the inner site already heavily silted and packed with vegetation was distinguished as La Marza G[rande] (the large Marsa) and the external part as La Marza Pi[ccola] (the small Marsa) (Perez d'Aleccio 1575-1580)¹⁸ (Figure 1). A century later Coronelli (1689 (map) mentions only La Marsa Piazzola, probably owing to increased siltation.

Figure 1. Detail from Matteo Perez d'Aleccio's Fresco Depicting the Arrival of the Ottoman Fleet - 18 May 1565, Showing the Old Marsa Sites as La Marza G[rande] and La Marza Pi[ccola] and the Adjacent Qormi village (Casal Curmi)



¹⁷Second Declension noun in the Nominative Plural form.

¹⁸The fresco is that depicting the arrival of the Ottoman Fleet dated 18 May 1565, at the Grand Masters' Palace, Valletta, Malta.

In the beginning of the twentieth century the British colonial authorities filled in all the shallow waters from the shores of Qormi to Porto Nuovo, between Church Wharf and Jetties Wharf (Marsa). This land-filled area is nowadays known as *Il-Marsa ta' l-Ingliži* (The English Marsa) which the British developed as a racecourse surrounding several other sporting facilities they called the *United Services Sports Club*, later known as the *Marsa Sports Club*.¹⁹

To the east of Qormi is a village called Marsa. It developed along the shores between the old Qormi shores and those on both sides of the Malta Grand Harbour. Marsa however is no new village as some may think. Its name can be attributed to the Arabs, who identifying it as the eastern part of Qormi Arabised the toponym Qormi to Marsa, also meaning anchorage, berthing and mooring place (Vella 2022, p. 6, Busuttill 1900, see 'marsa'). Although both toponyms refer to the same place, it must be acknowledged that the accessible shallow waters experienced during the classical period were no longer practicable in the medieval period when Malta went under Arab rule (870 AD). Siltation over centuries would have led the Qormi moorings impracticable and drove practices and facilities eastward as the mooring possibilities and shore facility moved. Thus while the Qormi inlet would have been functional till the late Roman era, it would have become redundant by the arrival of the Byzantines in AD 535-36, and the Marsa shore were the only accessible by sea by AD 870.

Considering that Greek was still used in the Roman (218 BC - AD c.450) and Byzantine rule (AD 553 - 870) in Malta, it is highly possible that while sections of the population referred to the village with its Greek toponym Qormi, ὄρμος (hormos) (mooringplace) Plato (Plato 1892, vol. vi) / ὄρμοι *hormoi* (Aeschylus 1851/1894), the Arab era (870 -1091) and their presence till c.1250 (Wettinger 1995, pp. 34–39, Vella 2022, p. 17) facilitated the use of *marsa* alongside the Qormi toponym. The Norman rule (1091 - 1130) in Malta and Sicily facilitated the use of Byzantine Greek at administrative levels, and could have helped the use or perpetuation of Greek words alongside the vernacular language (Maltese), and vocabulary added through the Arab influence.

Greek and Arabic Come Together

The word *marsa* is also found at other sea inlets around the Maltese islands. In these cases it is added to another word. Placenames including *marsa* are Marsascala/ Marsaskala, Marsamxett, and Marsaxlokk in Malta, and Marsalforn in Gozo.²⁰ The toponym discussed in this research is however that of Marsascala or Marsaskala.²¹ Assuming that the *marsa* term was added during the Arab occupation, there remains the second part of the same toponym which is 'skala' or the Latinised version 'scala'. The word σκάλα (*skala*) in maritime Byzantine Greek

¹⁹Marsa Sports Club website: <https://www.marsasportsclub.com/>.

²⁰Marsamxett, derives from two semitic words: the Arabic *marsa* and the Maltese *mxett*, which together mean a harbour where one can winter and graze the cattle or herds (Said 2006). Marsaxlokk is the harbour in the southeast of the island thus facing the scirocco (xlokk). Marsalforn is a reference to the lime kiln which in the past existed at that harbour.

²¹Marsaskala is a seaside village in the south of Malta.

suggests a wharf or landing place, thus a small inlet where one could land (Hartley 2004, q.v. ‘scala’ and ‘skala’, Sophocles 1900, p. 991, q.v. skala; Treccani see ‘scalo’ m.).²² The addition of the Arabic *marsa* in front of *skala* indicates the same meaning intended by the Greek word: a place where one could land.

Bullumeni and Melite

A similar occurrence is met at the ancient harbour city of Bormla, where a site called *Bullumeni* was recorded back in 1373 (Wettinger 2000, p. 72). Through a deep analysis of different sites at Bormla, Vella (2022, p. 15) maintains that *Bullumeni* is a colloquial derivation of both Arab and Greek words that refer to ‘harbour’, that is the conjoining of بـور (bur)²³ and λιμένα (liméni) (Vella 2022, p. 15).

While the Arab *bur* indicates shelter, haven, or port; the Greek λιμένα (liméni) as the dative singular of λιμήν/ λιμάνι (limen/limani) translates as ‘to the port / harbour’, with both words indicating a port with moorings where ships can load and unload, and a sheltered harbour where neither waves nor currents could stop its daily operations. The *Bullumeni/Burlimeni* site name is therefore a doubling of the Greek word for *harbour* in Arabic: an occurrence similar to what was earlier noted about the toponym Marsaskala.

Such conjoining of words having the same meaning in different languages, is also reminiscent of what Vella (2022, p. 20) maintains about the origins of the toponym Bormla, where the addition of the Arabic *bur* was added in front of the Phoenician *mlt* meaning refuge, shelter, haven, or port, giving birth to the present toponym of the said city from *bur+mlat* (Vella 2022, p. 20). Thus the occurrence of placenames and site names meaning *refuge*, thus Diodorus’s καταφυγήν (Bres 1816, p. 47, Busuttil 1971, p. 305, Bekker et al. 1888–1890, Book V, Ch 12 Sect 3, Liddell and Scott 1901, p. 780), at the same place strengthens the credibility of the Bormla harbour being the ancient Phoenician ‘maleth / malath / mlt’ and the Greek Μελίτη (Melite). It is also the reason why the Latin *tegimen* meaning shelter (Vella 2022, pp. 6, 15–16, 20 and 24 endnote 54), the *Ta’ Ġebel el Ban* site indicating the safe haven (Vella 2018, p. 93),²⁴ and the λιμένα discussed in this section all happen there.

Mandra - The Enclosed Harbour

Another site name which also occurs at Bormla is *Mandra* (μάνδρα), which literally means a pen normally for keeping livestock, an enclosed space, or a place closed by a partition (Bailly 1935, p. 1224, ‘μάνδρα’; Busuttil 1900 ‘mandra’). In nautical terminology *mandra* indicates an enclosure or sheltered safe place where

²²Translation of Treccani Dictionary online: from Latin *scala*, which in Byzantine Greek *skála* turned to mean a stone staircase which at the wharves of maritime ports served for landing/disembarkation.

²³In English phonetics ‘bur’ sounds as ‘boor’.

²⁴Quote: “the site known as Ta’ Ġebel el Ban”. In Arabic the toponym of the site means “the hill of the mainland” thus a prominent landmark indicating the safe haven or harbour of shelter for navigators.”

sea vessels were kept, also called *μανδράκι* (*mandraki*) (Vella 2022, pp. 9–10, de Graauw 2022).²⁵ The Mandra is mentioned in Lafreri's 1551 map (Ganado and Agius-Vadala' 1994, Balbi de Coreggio 1568, pp. 29, 30, 31, 61, 63, 70, 75 and 79, Ganado 1984, pp. 125–161 Plate IV, C: 139, Plate VI, E: 141, and Plate IX, K: 144)²⁶ and recorded in diaries of the 1565 Great Siege by Balbi de Coreggio (1568, pp. 29, 30, 31, 61, 63, 70, 75 and 79.) and Bosio (1602, pp. 519, 598, 603, 609, 615, 621, 622, 630, 631, and 709). In 1575-1581 Perez painted it in his frescoes at the Grand Masters Palace (Valletta).²⁷ It features prominently in cartography representing the 1565 Ottoman siege as *Mandrache*, *Mandrace*, *Mandraki*, *Mandrage* and *Mandrakion* (Ganado and Agius-Vadala' 1994, Vol I, pp. 32–33, 105, 105 n.11, 108, 126, 300 and 306, 346, 346 n.4, 357, 358 n.18, 364, 364 n.5, 412, 415 and 417, and respective Maps on Vol. II, pp. 36-37, 54, 57, 94, 95, 109, 112, 114, 126, 129, and 131). It referred to an 'internal harbour' (Corazzini 1906, Vol. V, pp. 43–44, Notarbartolo Malingri and Chighizola 2008, p. 137, Sau 2010, p. 141, Treccani, 'mandràcchio', Franzese 2010, No. 110, Vella 2022, pp. 10 and 14)²⁸ or a *closed place* similar to that of Constantinople (Vecchj 1895, p. 129, Ganado and Agius-Vadala' 1994, Vol. II, Map 71) and the *Mandracium* at Carthage (Le Beau 1784, XLII, p. 191, Gertwagen and Jeffreys 2012, p. 4, Evans 2000, p. 129, Holcroft 1653, I, p. 21). Other cartographic works mention it as *Mandraco*, *Mandracho*, (Nelli 1565, Ganado and Agius-Vadala' 1994, Vol. II, Maps 2-7)²⁹ *Mandracchio* (Ciantar 1772, p. 87, Collignon 1660-1669 (map), Abela 1647, I, pp. 18–19), and *Mandarage* (De Saint Non 1784, p. 106 (map), Grognet 1799 (map)), and features pictorially on other maps dating between 1565 and 1799 (Zeno 1567-1569, Braun and Hogenberg 1572-1617, p. 122)³⁰ (Figures 2 and 3). Among the different features attributed to places called Mandra, are that besides being a *gathering place* it includes the provision of services and facilities for loading and unloading (Franzese 2010, No. 110). It is also described as the place where small sea vessels can be moored, thus a sheltered dock (Preciuttini and Sbarbaro 2014, see *Darsena*). The Mandra is also recorded in the 1687 ecclesiastical records called *Status Animarum* as a quarter within the

²⁵Quote from de Graauw (2022): "Iekaniion, **mandraki** (Latin: navaculum?; FR: darse, bassin portuaire; GB: dock, harbour basin): enclosed area of water used for loading, unloading, building or repairing ships."

²⁶In Ganado and Agius-Vadala' (1994, Vol. II, 3), see also 'The method of the Turkish bombardment'.

²⁷See fresco 'Assedio e Batteria di S. Elmo - A.D. 27 Maggio 1565'.

²⁸Quote from Treccani, Enciclopedia Italiana: "MANDRACCHIO (da *mandra*). - Con antica voce italiana, comune tra i marinai, si chiamava così uno specchio d'acqua piccolo e chiuso, riservato in alcuni porti a stazione di lance, di chiatte, di barche e, in genere, di bastimenti minuti, nel quale essi erano quindi radunati come in *mandra*, e in maniera da ingombrare il minore spazio possibile, senza intralciare le manovre e gli attracchi delle navi maggiori. Il nome e il recinto, se non la funzione, rimangono tuttora in alcuni porti d'Italia (Genova, La Spezia, Napoli, ecc.) o di vecchia tradizione italiana, come Rodi e Malta."

Quote from Sau (2010): "Mandràcio, Mandracchio, Darsena. La parte interna del porto. E' quella parte del porto che a Isola protegge le imbarcazioni [...]. (Translation: Mandràcio, Mandracchio, Darsena. The inner part of the port. It is that part of the port that protects boats in Isola.)

²⁹The maps by Nelli show the Bormla harbour as the Porto Principale (the main harbour).

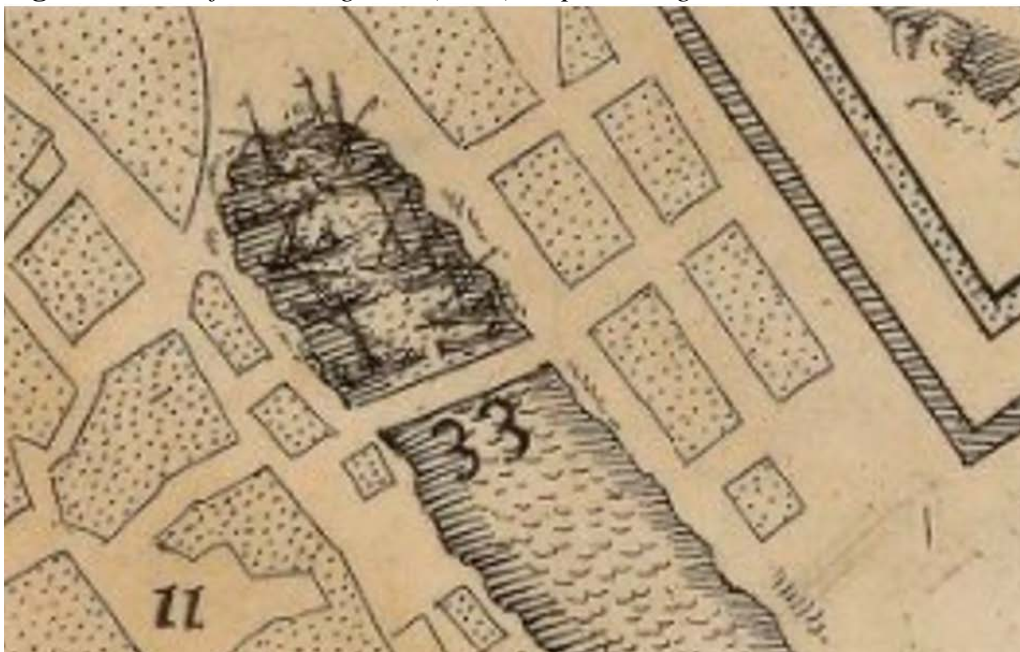
³⁰Zeno's map shows the '*mandrace*' at Bormla, and Braun and Hogenberg's map shows '*Le Mandarage*'.

parish boundaries was identified as *Manderagij* and *Manderagium* (Fiorini 1986, p. 49).³¹

Figure 2. Detail from Map by Frans Huys (c.1565) Showing the Mandra at Bormla (right), and the Chain Blocking Entrance into the Harbour (left) at the Tip of the Two Peninsulas on Each Side of the Bormla Harbour



Figure 3. Detail from Collignon's (1660) Map Showing the Mandra at Bormla



³¹In Fiorini (1986) see section mentioning the Bormla Parish Church *Status Animarum* for the year 1687.

Like ὄρμος, the term Mandra (μάνδρα) is sometimes explained as a reference to an internal part of a harbour, a mooring place, a darsena and mandracchio (Corazzini 1894, pp. 223–225, see *Porto*). Terminology such as *mandra*, *internal harbour*, *closed place* and *enclosure* attributed to ancient harbours and, in this case, to Bormla, lead to a further inquiry. The question here is whether the Bormla harbour qualified as a naturally closed harbour, that is what Pseudo-Skylax (Pseudo-Skylax 1878 (2015/2017), paras. 29, 33, 47, 58, 67, 88, 98, 99, 103, 104 and 106, Shipley 2010, Blackman et al. 2013, pp. 33–34, 186, 194, 200, 211–214, 216, 217, 265, 323, 349, 364 and 420, Mauro and Gambash 2020, p. 57, de Graaauw 2020, pp. 10 and 30) and Strabo (1903, 14.6.3, 17.1.6, and 17.1.9) mentioned as a ‘κλειστός λιμην’ (kleistos limen/closed harbour), or whether the closing happened owing to some man-made means or structure such as a mole or a chain (de Graaauw 2022).³²

Case for a Limên Kleistos?

The existence of the Mandra and its interpretation as a *closed place* or *internal harbour* opens further the discussion about the inner Bormla harbour prior to the arrival of the Hospitaller Order in 1530. The Mandra as shown on the earlier mentioned maps refers to the inner enclosure which is evidence of a man-made closed space. The question rests on whether an outer area of the sea was considered closed owing to its narrow natural geography or another man-made object such as a chain. If the Bullumeni (bur+limeni) site name was recorded in 1373, then the enclosed space or Mandra could have existed since classical antiquity and the early medieval period, when Greek was in use: possibly be the Byzantine period (AD 553-870). The Mandra as an enclosed space, was separating the inner enclosure for small vessels from that where the larger merchantile vessels would have harboured to load or unload merchandise and people travelling on the same voyages. The separation of such sea space and adjacent wharfs at Bormla was observed by Vella (2022, pp. 11, 12). It could therefore indicate that earlier than the modern age, the Bormla harbour could have had facilities with which to close access to the harbour or what is a κλειστό λιμάνι (kleisto limani) / λιμην κλειστός (limen kleistos) (Ginalis 2014, p. 29 fn 75). These are however not yet traced in historical publications concerning Maltese history, except in the sixteenth century and the 1565 Ottoman siege when the two headlands of the creek leading to Bormla were heavily developed as two new fortified cities: Isla (Senglea) and Birgu.

Coastal towers recorded prior to the modern age, that is pre-1500, were documented and located in the Maltese harbour (Vella 2022, pp. 11, 12, 13 (fig.4) and 14, Vella 2016, pp. 59–60). No document pre-dating the sixteenth century mention a closing of the harbour by a chain (Rougé, 1966, pp. 116–117), even for military purposes (Gerkan 1924, pp. 110–114), had yet been found. It is only after

³²Quote de Graaauw (2022): “limên kleistos (pl. limenes kleistoi) (Latin: portus; FR: port fermé; GB: closed port): intra-muros port connected to the city, protected by the city walls and with a narrowed entrance closable by means of doors and/or a chain”.

the governing Hospitaller Order (1530-1798) engaged in the building of massive fortifications that the full extension of the creek leading to Bormla and the harbours on both sides of Valletta became fortified and possible to close (Blackman 2008, p. 654, Lehmann-Hartleben 1923).

By excluding the developments occurring in Maltese harbours after 1530, the only harbour which could have acted as a closed harbour prior to that age was the inner part of the Bormla harbour, thus the narrow section including the Mandra, Vella (2022) defines the area as the sea space for commercial vessels and the Mandra for vessels belonging to the locals (Vella 2022, p. 12). The features survived for centuries and can be observed on medieval and modern age cartography. It presents characteristics attributed to a λιμὴν κλειστός (limen kleistos): that is a harbour with a naturally narrow entrance, and which was gradually provided with moles to protect an inner basin and supplied with a quay or wharf where vessels could load and unload cargo and people (Mauro and Gambash 2020, pp. 59–72, and 81).

Proof of harbour activity at the Bormla harbour since at least classical antiquity is deduced from excavations made in the mid-19th century (Smith 1848, p. 285, Vella 2018, pp. 88–96). The development of the Mandra at Bormla cannot yet be dated, even if the word itself echoes the Greek language and maritime terminology used by classical and medieval authorities ruling the Maltese Islands. The Mandra could have been larger than what is shown in medieval and modern age cartography and would have extended further inland beneath the open spaces now called *Pjazza Gavino Gulia* and *Wesgħat il-Knisja tan-Nativita*'. Assuming that the area was formerly a bay, it would have become impracticable owing to silt accumulating from the large catchment area and valley leading to it. If the deposits under this area are undisturbed they could render more tangible evidence than presently available.³³

Since remains of built structures from the early medieval or classical period, were either removed, recycled, integrated into newer structures, lost or destroyed owing to development, the post-war clearing of debris, or are still buried under the urbanised areas or submerged under the sea, the matter demands further research in archives not yet accessed or researched by scholars writing about Maltese history, serious archaeological surveys with the use of modern technology capable to reveal what lies beneath the urban and rural spaces, and the sea of the Bormla harbour and its adjacent creeks.

Some Terminology

Two Maltese words linked to harbour activity are 'moll' and 'skal'. *Moll* which means jetty extending into the sea derives from the Greek word μόλος / μόλος (mólos) (Hartley 2004). *Skal*, deriving from the Greek *skala*, refers to a man-made slipway which provides maritime vessels the facility to land (de

³³Modern technology such as the ground penetrating radar can be significantly helpful.

Graauw 2022).³⁴ Some other words heard among maritime communities are listed in Table 1, in Greek alphabet, accompanied by their Greek phonetic and meaning, the Maltese word and its meaning to the Maltese maritime community.

Table 1. *Some Greek Words Used Among Maltese Maritime Communities*

Greek	Phonetic	English meaning of Greek term	Maltese	English meaning of Maltese term
Άσπρος	aspros	white	aspru	'a white sea' – refers to a calm sea with a flat surface, the reflection of which above the horizon is white and solid rather than the usual bluish hue. ³⁵
Κάβος	kavos/kabos	cape	kap	cape of land extending on the sea
κουρσάρος	koursáros	corsair	kursar	corsair
κοχύλι	kochýli	sea-shell	kočċla (singular) / kočċli (plural)	shells and molluscs stuck to the bottom of sea vessels ³⁶
λείος	leíos	smooth (sea)	lixx	smooth / calm sea
μόλος / μόλος	mólos	breakwater, jetty	moll	construction onto the sea
παράλια	paralía	beach	plajja	beach
πόρτο	porto	small harbour	port	harbour
σκάλα	skala	quay, landing place	skal	slipway, a sloping ramp on which boats can be pulled in and out of the water.
βράχιον	vrahion / brachion	rock	barkun	barge

Greek Connections at Bormla

As the sea level changed and the Bormla harbour flooded during the Phoenician era (Vella 2017a, p. 61, Vella 2022, p. 21), it attracted navigation and commerce. Greek vessels would have used it on their trade routes and travel through the central Mediterranean. Throughout the Roman era, the use of Greek became frequent. Although the Acts of the Apostles, thought to be written by St. Luke referred to the locals as non-Greek speakers (KJBV, Acts 28: 2 and 4), it is however acknowledged that people whose activities were at harbours would have learned to communicate in either of the classical languages. After the fall of the Western Roman Empire, the Eastern Empire known as the Byzantines took the Maltese islands in AD 535-536.

Apart from exercising power, authorities and institutions used Greek or Latin among other for administrative and ceremonial purposes, and this could have

³⁴Quote from de Graauw (2022): **skala** (Latin: scala; FR: appontement, débarcadère; GB: wharf, landing stage; US: pier, landing stage): structure to load and unload ships, usually on piles (e.g. finger pier).

³⁵From *Il-Miklem*, see 'baħar abjad'.

³⁶From *Il-Miklem*, see 'kočċla'. <https://www.ilmiklem.com/koccla/>.

facilitated acceptance among the most exposed communities. From the Byzantine (c.500-869 AD), Norman (1091-1194) and Hohenstaufen (1194-1266) rules till 1516, the use of words such as ‘Mandra’ were facilitated as Greek was an official administrative language of the Sicilian Crown, and as such Greek terms became common among Mediterranean maritime powers such as Genoa, which harboured their fleet at Malta for years. For two centuries the Arabs ruled Sicily (827-878) and Arabic as an official administrative language ousted Latin completely but not Greek, which in north Sicily kept being spoken (Linguistica Siciliana 2007). Concurrently the Sicilian language enriched itself with Arab vocabulary. Since Malta formed part of the Sicilian domain, it was important to find proof of the Greek-Arab influence which evidences for the harbour function at Bormla.

Bearing in mind that Bormla was for centuries the destination harbour for vessels arriving in Malta, travellers, traders, navigators and crews, the Byzantine rule would have facilitated contacts with the Greek world and culture. Among these were monks who, during the iconoclastic periods (AD 726-787 and 814-842), fled from the centres of power to safeguard treasures and other objects of cult associated to their belief which would have been destroyed forever (Vella 2016, pp. 56, 58–59). Just a few metres away from the seashore is an ancient rock-cut church dated to the end of the eighth and the beginning of the ninth centuries (Vella 2016, pp. 56 and 73). It was recorded that besides the ritual Byzantine objects inside the church were many statuettes of Greek origin and that next to the church there was also a burial ground which among other contained a tombstone inscribed in Greek with the name of a lady named Crispia presumed to have been a wealthy or noble person living in the area (Ciantar 1772, p. 319, Caruana 1882, p. 166, Grech 1954, p. 2, Vella 2016, pp. 53–54). Another connection to the Greek culture arrives from a large icon of the *Theotokos* surrounded by Byzantine saints (now presumed lost, stolen or misplaced) which existed at the same rock-cut church and which was recorded in the parish inventory of 1700 (Ciantar 1772, p. 216, Cassar 1949, p. 14, Vella 2016, pp. 50 and 73).

Connected to the same church is a triangular inscription in Greek described by Ciantar (1772) which showed the script:

‘ΙΩΝ ΕΥΨΟΡΕΘΕΩ ΕΥΣΕΒΙΑΣ ΗΘΙΝΕ ΗΜΑΣ ΕΞΕΝΟΣΑ ΙΚΑΙΑ
... ΟΥΣΙΕ ΥΓΕΡΘΕ ΕΚΑΙΥΓΙΡΑΓΑΘΕ. ΤΩΝΧΕΤ. ΣΤΑ-
ΟΤ. ΣΩΓΤΗ. ΕΚΓΛΑΨ ... ΘΑΣΟΤ. ΑΝΑΣΤΑΣΕΟΣ ΔΥΘΗΜΕ ... ΘΑΝ ... ΟΝ.’³⁷

Another archaeological find at Bormla, which the author witnessed personally, is an inscription found underneath a private residence which showed features of an ancient threshing floor or mill, in Triq San Lazzru. It consisted of an inscription carved into a block of Maltese limestone (Vella 2016, pp. 50, 52–53 and 56–57).

There are yet no records of Greek connections during the Arab rule of Malta, however as the Maltese Islands became part of the Sicilian monarchy, Greek was again used among administrative ranks of the kingdom. Maltese toponyms and site names underwent modification and Arabisation during the Arab rule, added terms as *bur*, *marsa* and other vocabulary to earlier or contemporary toponyms. Together

³⁷The inscription is quoted from Ciantar (1772, pp. 531–533, Lib. II, Not. XXXIII).

Mandra (μάνδρα) and *Bullumeni* (Bur-limani) provide evidence for Greek influence in Sicilian Malta, particularly at the Bormla harbour. Other, but indirect, contacts with the Greek world happened during the thirteenth century when the Genoese present in Malta armed and equipped vessels (Belgrano, and Imperiale di Sant'Angelo 1901, L, LIV) organised raids and attacks on the Venetian colonies of Corfu (De Negri 2003 (Rep. 2007), p. 329) and Candia (Belgrano and Imperiale di Sant'Angelo 1901, see Annales Ianvensis 1223, LIV, De Negri 2003, p. 330).

Conclusion

The study showed that Maltese toponyms and site names of Greek origins owing to their mirroring or actually containing Greek words occur at sea inlets and creeks which could have served as harbours or safe havens for navigating and maritime people (Figure 4) The occurrence of both toponyms and site names resulted higher in the south of Malta and around its ancient harbour, known as Bormla. All such harbours and inlets lead to the open sea facing the north-east to east-north-east direction: the navigation route to Greek lands and islands, with the exception of the Gozitan inlet which faces west.

Figure 4. Map of the Maltese Islands and the Harbour Sites with a Greek Toponym or Site Name



Figure 5. Close up of the Southern Part of Malta Where the Greek Place and Site Names Occur. Map Showing (from left to right) The village of Qormi (Q) and its Ancient Shoreline (S, yellow line), Marsa (M) and the Reclaimed Sea Area (R), the Inner Bormla Harbour Area (circled in yellow) and the Inlet of Marsascalea (C). Courtesy: Google Maps and Google Earth



These finds show that contacts between the two cultures had a higher occurrence at maritime destinations such as harbours, ports of call and safe inlets. (Figures 4 and 5) Maritime communities were those who kept using such toponyms and site names through the centuries, and their use was recorded on documents as those mentioned in this study and works cited by the research. Events in history had however heightened the importance and use of the Greek language and Greek nautical terminology in the Maltese islands. Although coins and tangible artefacts can be dated with ease, the toponyms and site names could not be dated with precision even if the Maltese islands had for centuries experienced the use of Greek and were ruled by a Greek empire as that of the Byzantines. Greek presence more than colonisation could have happened prior to the Phoenicians' stronger arrival on the Maltese islands, but archaeological finds as the *cippi* and the minting of coins point to a commercial supremacy between the second and first centuries BC, first in Malta and later in Gozo, and which however was shadowed by the fast-growing Roman Empire even in the Maltese Islands. The toponyms and site names identified are therefore a heritage which can tell more about the meeting of the Maltese and Greek cultures in history.

Acknowledgments

My thanks go to my family for their support and patience during the course of this study.

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Is the Main Character of the *Odyssey* Really the Odysseus from the *Iliad* Himself?

By Felice Vinci* & Arduino Maiuri[‡]

In the Odyssey the figure of Odysseus appears very different from the one outlined in the Iliad, in which he is not an archer. Also considering many other details of the Odyssey narrative – for example, the concomitance between the journey of Telemachus in search of news of his father and the unexpected return of Odysseus after twenty years, not to mention Odysseus's strange departure from Ithaca after the massacre of the suitors – it is reasonable to assume that who could hide behind the character of Odysseus could be an expert fighter engaged by Telemachus to prevent Penelope's impending marriage (which might have jeopardized his aspiration to become king of Ithaca). Actually, all the characteristics of the protagonist of the Odyssey correspond in an extraordinary way to those of a hero of the Iliad, the Cretan Meriones, who during the Trojan War had distinguished himself as a very strong and shrewd warrior and archer: it was he who won the archery competition in the games on the occasion of Patroclus's funeral. One can assume, therefore, that Telemachus on his journey to Pylos and Sparta met that veteran of the Trojan War who put his experience as a fighter at the disposal of the son of his former comrade in arms, helped him solve his problems and left soon after. However, later the poet of the Odyssey would have twisted the reality of the facts in order to transform the final massacre of dozens of unarmed men into a heroic and morally acceptable act. One should also consider that in this new interpretation the journey of Telemachus gains a fundamental importance, while in the traditional reading of the Odyssey it appears completely irrelevant.

Keywords: *Odyssey, Odysseus, Meriones, Homer, Ithaca*

By carefully examining the figure of Odysseus, as it appears in the *Iliad* and in the *Odyssey*, we realize that various features of this character completely change from one poem to another. Not only that: the protagonist of the *Odyssey* has many characteristics that strangely make him appear extraordinarily similar to Meriones, the young hero who according to the *Iliad* was the deputy commander of the Cretan contingent in the Trojan War. Why? What intrigue could be hidden behind the story of Odysseus' return to Ithaca twenty years after his departure for the war? This is what this article will try to clarify, using a methodology consisting of a new critical examination of the sources, in particular the episodes of the two poems that involve the main characters of this singular story.

However, before examining the intricate question of the real identity of the protagonist of the *Odyssey*, a premise is needed, namely that in this poem it is reasonable to assume that there is a part of historical truth and a part of invention,

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as in a novel (Montiglio 2005). If there is a part of historical truth (of which we cannot be sure, but it is possible), it is found in the events of Odysseus in Ithaca, while the vicissitudes of his return to Ithaca after the Trojan War – not to mention the characters he meets in these adventures (Aeolus, Polyphemus, Calypso, Circe, Tiresias, and so on) – cannot be considered a true story, that is, a story that reflects reality (Courtieu 2019).

Let us first examine the beginning of the *Odyssey*. It shows the difficult situation of Ithaca twenty years after his departure for the war: nothing is known about the fate of Odysseus, and his son Telemachus, given his young age, does not have the authority to succeed him as king of Ithaca. In this power vacuum, the suitors of Penelope, who have long since settled in her house and devoured her husband's wealth, squander his riches (Steinrück 2008).

In reality Penelope is near to her second marriage, probably with Eurimachus, as a passage of the poem seems to imply: “By now her father and brothers are forcing her/ to marry Eurimachus, who surpasses all/ suitors with gifts”¹. This could cost Telemachus kingdom and riches: in fact he would inherit Odysseus' γέρας, that is, the “royal dignity”, only on condition that Penelope did not remarry, as is clear from Odysseus' conversation with his mother's soul in Hades: “Tell me about my father and my son that I left:/ is my γέρας still theirs? Or maybe/ another of the nobles got it and they no longer believe that I will return?/ Tell me the will and the thoughts of my wife,/ if she stays with our son and she keeps everything faithfully,/ or if the noblest of the Achaeans has already married her?/ I asked this and my mother replied:/ Absolutely not! She remains faithful/ in your home [...] no one has your beautiful γέρας”². So Telemachus decides to leave secretly, naturally without telling his mother, to go and ask for help from his father's old friends: Nestor in Pylos (Wathelet 2020) and Menelaus in Sparta (Castiglioni 2020).

In the *Odyssey* there is an explicit reference to his intention of seeking help in the worried words of the suitors, when they discover that he has left: “Ouch, ouch! Telemachus wants to plot our death!/ Certainly he will bring defenders from the sandy Pylos/ or from Sparta”³. On the other hand, shortly before, he himself had threatened them: “You will die in this salon, without revenge!”⁴.

Afterwards, when Telemachus returns to Ithaca, his father's return, after twenty years, happens almost at the same time: this singular coincidence – which is the basis of the sequence of events in the poem – could give rise to many doubts about the real identity of this revived Odysseus. The two meet in the hut of the faithful swineherd Eumaeus (Roisman 1990, Newton 2014–2015), a secluded

¹ Ἡδὴ γὰρ ῥα πατὴρ τε κασίγνητοὶ τε κέλονται/ Εὐρυμάχῳ γήμασθαι· ὁ γὰρ περιβάλλει ἅπαντας/ μνηστῆρας δώροισι (Od. XV, 16–18).

² Εἰπέ δέ μοι πατρός τε καὶ υἱέος, ὃν κατέλειπον,/ ἢ ἔτι πᾶρ κείνοισιν ἐμὸν γέρας, ἧέ τις ἦδη/ ἀνδρῶν ἄλλος ἔχει, ἐμὲ δ' οὐκέτι φασὶ νέεσθαι;/ Εἰπέ δέ μοι μνηστῆς ἀλόχου βουλὴν τε νόον τε,/ ἧέ μένει παρὰ παιδί καὶ ἔμπεδα πάντα φυλάσσει/ ἢ ἦδη μιν ἔγημεν Ἀχαιῶν ὅς τις ἄριστος;/ Ὡς ἐφάμην, ἢ δ' αὐτίκ' ἀμείβετο πότνια μήτηρ-/ ‘Καὶ λίην, κείνη γε μένει τετληότι θυμῷ/ σοῖσιν ἐνὶ μεγάροισιν· [...] σὸν δ' οὐ πῶ τις ἔχει καλὸν γέρας (Od. XI, 174–184).

³ Ἡ μάλα Τηλέμαχος φόνον ἡμῖν μερμηρίζει./ Ἡ τινας ἐκ Πύλου ἄξει ἀμύντορας ἡμαθόεντος/ ἢ ὅ γε καὶ Σπάρτηθεν (Od. II, 325–327).

⁴ Νήπιοινοὶ κεν ἔπειτα δόμων ἐντοσθεν ὄλοισθε (Od. II, 145).

place outside the city, from where afterwards they separately reach the house of Odysseus to carry out the massacre of the suitors. In reality, everything happens as if Telemachus had returned from his journey with a “someone” who then helped him to get rid of the suitors and foil his mother’s marriage which would have crushed his ambition to become king of Ithaca.

We find a first confirmation in an odd, unexpected event that occurs at the end of the poem: this Odysseus – whom significantly no one recognizes, except his old dog¹ and his nurse⁵ (Mueller 2016, Scheid–Tissinier 2015), but who several times in the course of the poem presents himself as a Cretan, before declaring himself as the hero returned after many years – after the massacre declares that he will have to leave immediately to go in search of “people unaware of the sea,/ who do not eat foods seasoned with salt”⁶. This is absurd behaviour for a man who has finally returned to his home after a very long absence! However, this oddity can be easily explained by a substitution of person. In short, at first glance there is no lack of reasons to suspect that the protagonist of the *Odyssey* does not actually identify himself at all with the cunning character who fought against the Trojans in the *Iliad*.

Moreover, there is another very significant fact: the characteristics of the would-be Odysseus who arrives in Ithaca at the same time as Telemachus’ return correspond in an extraordinary way to a hero of the *Iliad*.

In fact, the protagonist of the *Odyssey* in order to hide his identity systematically declares, on several occasions, to be a Cretan, also claiming to have been in contact with Idomeneus, the king of Crete: “Then they bade me and glorious Idomeneus/ to lead the ships to Ilium”⁷. But this corresponds to the fact that, according to the Catalog of Ships, the Cretan contingent in the Trojan War actually had two commanders: the elderly Idomeneus and the young Meriones (“of all these was Idomeneus, famed for his spear, captain,/ and Meriones, the peer of Enyalios, slayer of men”)⁸.

The *Iliad* presents Meriones as a very gifted young man, who on many occasions stands out for his skill and courage, to the point of being even compared

⁵“This – the reference is to the wound inflicted on him by a boar above the knee, while he was hunting on Mount Parnassus with Autolicus’s sons – scar the old dame, when she had taken the limb in the flat of her hands,/ knew by the touch, and she let fall the foot” (τὴν γρηῶς χεῖρῶσι καταπρηγέσσι λαβοῦσα/ γνῶ ῥ’ ἐπιμασσαμένη, πόδα δὲ προέηκε φέρεσθαι, *Od.* XIX, 467–468).

⁶Οἱ οὐκ ἴσασι θάλασσαν/ ἄνδρες, οὐδέ θ’ ἄλεσσι μεμιγμένον εἶδαρ ἔδουσιν (*Od.* XXIII, 269–270).

⁷Δὴ τότε ἔμ’ ἦνωγον καὶ ἀγκαλυτὸν Ἰδομενεῖα/ νήεσσ’ ἠγήσασθαι ἐς Ἴλιον (*Od.* XIV, 237–238). On the juxtaposition between this important character and Meriones it is instructive (Haft 1984). In particular, on Idomeneus linger (Federico 1999, Valverde Sánchez 2005, 2016). Camerotto (2010) proposes the interpretation of the myth as an open weaving system: the character disappears from the epic tradition from Hesiod to Lycophron and the examination of his role in the Homeric poems and of the different traditions of his νόστος, also thanks to the targeted comparison with the five false Cretan stories presented in the *Odyssey* (XIII, 256–286; XIV, 192–359, 462–506; XVII, 415–444; XIX, 165–202; XXIV, 303–314), allows to note the crucial importance of the island of Crete as a bearer of “other” traditions and cultures compared to the Greek world.

⁸Τῶν μὲν ἄρ’ Ἰδομενεὺς δουρὶ κλυτὸς ἠγεμόνευε/ Μηριόνης τ’ ἀτάλαντος Ἐνυαλίῳ ἀνδρειφόντῃ (*Il.* II, 650–651). In this regard, a recent thematic study proposes the comparison between a XI century BC tomb in Knossos, rich in exceptional weapons for both Greek archaeology and Homeric poems, and the tradition relating to Cretan tales in the *Odyssey*, highlighting their significant impact on the art and literature of subsequent eras (Kotsonas 2018).

to Ares, the god of war⁹: in the course of the poem he kills seven Trojans in combat, where he is very fast (Homer calls him “quick foot”, as Achilles is called), very athletic (he jumps “like a hawk”), even acrobatic (when with a leap he manages to dodge the spear of Aeneas), extremely courageous (he does not hesitate to challenge Hector to a duel and fights like a lion, in one of the most fierce battles of the poem, to recover the corpse of Patroclus). Furthermore, his victory in the archery competition corroborates his eclecticism as a fighter, skilled with all types of weapons.

But Meriones in the *Iliad* also stands out for his intelligence and perspicacity, to the point of being called “wise”, “sagacious” (πεπνυμένος)¹⁰: in fact he is often entrusted with tasks of great responsibility, such as, for example, assisting Idomeneus in the deployment of the Cretan contingent before the battle¹¹, taking care of the guard service of the Achaean camp at a very critical moment¹², organizing the collection of wood for the stake of Patroclus, a very risky operation¹³.

He also has an uncommon dialectical ability, as emerges from his discussion with Idomeneus¹⁴, nor fails to give a biting answer to Aeneas¹⁵ in the duel in which his very prestigious opponent defines him “valiant” (ἔσθλός)¹⁶. In short, Meriones has all the characteristics of warrior ability, intelligence, organizational ability, promptness of spirit, courage and sangfroid that we find in the protagonist of the *Odyssey*. So it is not by chance that Meriones is mentioned more than fifty times in the *Iliad*.

Furthermore, another precise indication that the Cretan Meriones is identifiable with the one who helps Telemachus to get rid of the suitors, is found in a sentence that the *Odyssey* attributes to Odysseus: “Only Philoctetes excelled me with the bow/ in the land of the Trojans, when we Achaeans shot”¹⁷. Now, at least until

⁹“The peer of swift Ares” (θοῶν ἀτάλαντος Ἄρηϊ, *Il.* XIII, 328).

¹⁰*Il.* XIII, 254; 266.

¹¹*Il.* IV, 253–254.

¹²*Il.* IX, 80–85.

¹³*Il.* XXIII, 110–124.

¹⁴*Il.* XIII, 248–273.

¹⁵*Il.* XVI, 620–625.

¹⁶*Il.* XVI, 627.

¹⁷Οἷος δὴ με Φιλοκτήτης ἀπεκαίνυτο τόξω/ δῆμω ἔνι Τρώων, ὅτε τοξαζοίμεθ' Ἀχαιοί (*Od.* VIII, 219–220). According to Mackie (2009), the examination of the role played by the mythical archer in the first Greek sources, and in particular in the Homeric tradition (*Il.* II, 716–728; *Od.* III, 190 and VIII, 215–228), highlights his role in both poems, although in neither of them he was a central or particularly enterprising character. On the importance of archery, and not only in this scene of the *Odyssey*, it is enough here just to refer to Walcot (1984) (on the decisive and statutory centrality of the rite in ancient civilizations, especially in the Egyptian and Mycenaean tradition); Crissy 1997–1998 (when Odysseus gets the bow, Heracles also appears, despite the anachronism inherent in the fact itself: but the fact can be justified by thinking of the blurred outlines of the age of heroes, since Heracles appears two more times in the poem – respectively in *Od.* VIII, 219–225 and XI, 601–608 – and it is clear that his presence before the massacre of suitors contributes to increasing the emphasis and solemnity of the event); Ready (2010) points out, in particular, the similarity, which in the Homeric interpretation can be considered completely self-referential, between the hero who strings his bow and the singer who repairs his lyre: *Od.* XXI, 401–409. What has been revealed so far has converged in the recent highly original reconstruction proposed by Grethlein (2019),

Philoctetes recovered and returned from Lemnos, the most talented archer of the Achaean army was Meriones, who in fact won the archery competition at the Patroclus's funeral¹⁸ defeating Teucer with a feat worthy of Robin Hood! On the contrary, Odysseus in the *Iliad* is by no means an archer, which is also shown by the fact that on that occasion he participated in two of those competitions (running and wrestling) but not in archery.

It is therefore reasonable to suppose that – assuming that the *Odyssey* was based on a historical reality – Telemachus met in Sparta this veteran of the Trojan War (who in the *Iliad* appears on excellent terms with Menelaus) who, by now a middle-aged man, put his experience as a fighter at the disposal of the son of his former comrade in arms, accompanied him to Ithaca and helped him solve his problems, leaving immediately after finishing his “job”. However, the first cantor of the *Odyssey* could have thought that a much better and above all more morally acceptable conclusion of his poem was a massacre of many unarmed men carried out by Penelope's husband (Figure 1), suddenly reappeared after conquering an impregnable city and after living extraordinary adventures.

Figure 1. *Odysseus Shooting an Arrow at Suitors.* Red-figure Attic Skyphos by the Penelope Painter, Ca. 440 BC, from Tarquinia (Berlin, State Museums)



For this purpose the poet – perhaps on request of some descendants of Odysseus and Telemachus, annoyed about the bad name that this grim affair had brought to his family – would have manipulated the whole story, making it much

according to which Odysseus's attention to the arch, or to the bed (*Od.* XXIII) and the orchard itself, proceed in perfect harmony with modern Thing Theory (a branch of New Materialism).

¹⁸*Il.* XXIII, 870–882. Cfr. Edwards (1986) (the Homeric descriptions of the funerals represent archetypal scenes, as shown by those relating to Achilles in *Od.* XXIV, 43–92, Patroclus in *Il.* XXIII and Hector in *Il.* XXIV), and Tarenzi (2005) (the attestation of the recurrences of this attribute, referring to Patroclus in the *Iliad*, allows us to hypothesize a link with the rituals of the ancient Near East, which facilitates the understanding of the Homeric account of the warrior's funeral).

more politically correct through a series of amazing fake news cleverly constructed and distributed throughout the poem: for example, the episodes of the dog Argos and the old nurse (the only ones who recognize Odysseus), the structure of the bed built around a tree, the goddess Athena who often addresses the protagonist directly and so on.

Furthermore, this hypothesis fits very well with a passage from Book X of the *Iliad*, which alludes to a close relationship between Odysseus and Meriones: the latter, in fact, just before Odysseus' nocturnal incursion into the Trojan camp, "gave him a bow and a quiver/ and a sword, and about his head he set a helm"¹⁹, which was initially donated by Odysseus' grandfather to a friend of Meriones' father and then arrived, passing through hand in hand, up to the Cretan hero²⁰.

Now, it is well known how important the bonds of friendship were in Homeric society, which were handed down from one generation to the next and expressed themselves through exchanges of gifts, favours and hospitality. Not only that: behind this passage of arms from Meriones to Odysseus one could glimpse a symbolic overlap between the figures of the two heroes, perfectly consistent with what has emerged so far. In fact, for an archaic mentality the weapons of a warrior, in particular the helmet, in a certain sense represent his identity. In this regard, according to the scholars there is a unity of heroes and weapons, for which weapons are the form of the hero (Snodgrass 1964). Therefore, any request for help from Telemachus to his father's ancient comrade in arms could not possibly go unheard.

On the other hand, the book X of the *Iliad* (which, we recall, tells of an incursion by Odysseus and Diomedes into the Trojan camp) presents many points of contact with the episode, reported in the XIV book of the *Odyssey*, of the raid of a group of Achaeans under the snow up to the walls of Troy in a frozen night²¹. In fact both episodes refer to nocturnal operations with few men in enemy territory to gather information, require skill and uncommon courage, have among the protagonists Odysseus, and are not found in other episodes of the *Iliad*. All this seems to suggest that Book X – in which Odysseus is armed with a bow (and not a spear) – was initially part of a primitive version of the *Odyssey*, perhaps in terms of memory of the past events of the Trojan War (as is the episode of the frozen night), which "floated" in the oral tradition; then it was eventually inserted, with the necessary adaptations, in the text of the *Iliad*, perhaps on the occasion of the writing of the oral songs from which the two poems would have been born, when the various episodes of the Homeric *epos* were rearranged to form the two poems as we know them today. Hence its extraneousness with respect to the *Iliad*, noted since ancient times. In confirmation of this, according to scholars, Book X of the *Iliad* shows some aspects reminiscent of the *Odyssey*²².

¹⁹Μηριόνης δ' Ὀδυσῆϊ δίδου βιὸν ἠδὲ φαρέτρην/ καὶ ξίφος, ἀμφὶ δὲ οἱ κυνέην κεφαλῆφιν ἔθηκε (*Il.* X, 260–261).

²⁰*Il.* X, 266–271.

²¹Νὺξ δ' ἄρ' ἐπῆλθε κακὴ Βορέας πεσόντος,/ πηγυλῖς· αὐτὰρ ὕπερθε χιῶν γένετ' ἠὔτε πάχνη, ψυχρή, καὶ σακέεσσι περιτρέφετο κρύσταλλος (*Od.* XIV, 475–477).

²²According to Haft (1990), although the *Iliad* makes no explicit reference to the wooden horse or to the decisive role of Odysseus in the capture of Troy, they would both be concealed in II, 1–483 and in the X book.

Moreover, in this new key, Telemachus' trip to Pylos and Sparta to get news of his father²³ acquires a very precise meaning, while in the traditional reading of the *Odyssey* it appears completely useless for the purposes of subsequent developments. Yet the strategic importance of this trip emerges at the very beginning of the poem, in a sentence that Athena addresses to Telemachus: "I will give you wise advice, if you want to listen to me"²⁴. Here the goddess urges him to go to Pylos and Sparta and then, on his return, to resolve the question of Penelope's suitors, also resorting to murder: "Therefore take thought in mind and heart/ how you can slaughter suitors in your home whether by guile/ or openly"²⁵.

In reality, this "wise advice" in itself has no relevance for the purposes of the current *Odyssey*, in which this trip is completely irrelevant: Telemachus could have stayed quietly at home without changing anything in the unfolding of subsequent events! Instead, in this reconstruction the initial intervention of the goddess becomes strategically fundamental, indeed, it represents the true opening of the poem, because it sets off that journey whose final outcome is the massacre of the suitors and Odysseus' victory. On the other hand, the Homeric gods never intervene without reason in human affairs. Therefore, the new hypothesis presented here fits very well into the plot and structure of the *Odyssey*, making it much more united, coherent and consequent.

In any case, the important convergences emerged between the Odysseus of the *Odyssey* and the Meriones of the *Iliad* make the question of the genesis of the two poems and their relationships even more intricate and intriguing than we have been allowed to think so far. It is an almost Pirandello-like situation, with a sort of complicated game of mirrors and backgrounds between the lies of Odysseus, who in the *Odyssey* pretends to be a Cretan, and those of the cantor who sings his deeds, who in turn seems to want to present to us, passing it as a lie, what may have been the truth! At this point one would almost wonder if the origin of the so-called "liar paradox" (the famous phrase, attributed to a Cretan, "Cretans are all liar", which can be neither true nor false) was the intuition of someone who already in ancient times had decrypted this juxtaposition between the "Cretan" Meriones and the "liar" Odysseus. In these sophisticated games of exchanges the maximum of ambiguity is probably reached when, in the story of the nocturnal incursion under the walls of Troy, the poet has his Cretan Odysseus say that "the leaders were Odysseus and Menelaus,/ the third commander was me"²⁶. In this passage, this pronoun "me" (ἐγών in Greek) could actually be subtly "true": in fact, behind the disguises of the "false Odysseus" Meriones could be hiding, in the act of recounting a fact of which he had actually been the protagonist together with the "true" Odysseus, the one of the *Iliad*. In short, the poet of the *Odyssey* was no less astute and subtle than his character!

²³In *Od.* I–IV e XV (Rose 1967).

²⁴Σοὶ δ' αὐτῷ πυκινῶς ὑποθήσομαι, αἶ κε πίθηαι (*Od.* I, 279).

²⁵Φράζεσθαι δὲ ἔπειτα κατὰ φρένα καὶ κατὰ θυμόν/ ὅπως κε μνηστῆρας ἐνὶ μεγάροισι τεοῖσι/ κτείνῃς (*Od.* I, 294–296).

²⁶Ἠγείσθην δ' Ὀδυσσεύς τε καὶ Ἀτρεΐδης Μενέλαος,/ τοῖσι δ' ἅμα τρίτος ἄρχων ἐγών (*Od.* XIV, 470–471).

It also seems significant to us that the “Odysseus” of the events set in Ithaca is a great archer, while the protagonist of the adventures told in the first person to the Phaeacians is not an archer at all: for example, when he has to defend himself from Scylla²⁷, or when he kills a deer on the island of Circe²⁸, we see him acting with the spear (and not with the bow, as, given the circumstances, it would have been more natural).

In short, the image of Homeric Odysseus seems to arise from the juxtaposition of even three different characters: that of the *Iliad* (who is not an archer, with the exception of Book X, on whose origin we have already focused); that of the events of the *Odyssey* set in Ithaca (who is a great archer, behind whom the Cretan Meriones is hiding); and, finally, that of the adventures of the *Odyssey*, who, like the first, prefers the spear to the bow (maybe the latter had originally been the protagonist of some ancient saga of seafaring adventures, reused and appropriately adapted by the poet of the *Odyssey* to justify the very long absence of Odysseus from Ithaca).

As for poor Penelope (who had been kept strictly in the dark about the plot hatched by her son, and saw the feast of her second marriage changed into a horrible carnage), she would eventually find herself with the cold comfort of going down in history as the prototype of a perfect wife!

Still on Penelope²⁹, here one naturally wonders what was the real motivation that pushed the young scions of Ithaca and the nearby islands – who are systematically called “young” (νέοι) or “boys” (κοῦροι), being almost the same age as Telemachus – to court her despite her middle age.

Telemachus himself gives the answer when he mentions Eurimachus, who “is the noblest prince, and most of all desires/ to marry my mother and get Odysseus’ royal dignity (γέρας)”³⁰. The post at stake, therefore, was the γέρας, closely connected to the marriage with Penelope, as we saw earlier in the illuminating dialogue between Odysseus and his mother.

This word, γέρας, has the specific meaning of “royal dignity”, or “exercise of sovereignty”: we also find it in the *Iliad*, where the γέρας is the name of the “power” that Priam holds, and which he obviously intends to transmit to his descendants³¹. On the other hand, there is no lack of clues that even Odysseus had

²⁷*Od.* XII, 223–259.

²⁸*Od.* X, 156–184.

²⁹About her it is good to offer some targeted bibliographic details. The starting point can undoubtedly be identified in the motif of the web, which Christol (2015), ingeniously compared to an Indo-European cosmic myth, adapted to the ideology of the heroic Greek world, in which weaving is an essential stage in the process of Odysseus’ regaining of Penelope: hence the triple re-proposition of the motif in the poem (*Od.* II, 93–109; XIX, 149–150; XXIV, 139–140). Based on a more general structure, but still attentive to the aspect of weaving, even in its declination within the various literary civilizations, are Gualerzi (2007) and Nenci (2015). Other texts with an original perspective cut are, on a comparative level, Helleman (2009), and about the compositional technique Grethlein (2018) (Penelope’s actions are not dictated by psychological reasons, but rather by plot-related needs).

³⁰Καὶ γὰρ πολλὸν ἄριστος ἀνὴρ μέμονέν τε μάλιστα/ μητέρ’ ἐμὴν γαμέειν καὶ Ὀδυσσεύος γέρας ἔξειν (*Od.* XV, 521–522).

³¹“Nay, but though thou slayest me,/ not for that shall Priam place his kingship in thy hands” (ἀτὰρ, εἴ κεν ἔμ’ ἐξαναρίξῃς,/ οὐ τοι τοῦνεκά γε Πρίαμος γέρας ἐν χερὶ θήσει, *Il.* XX, 181–182).

achieved the kingship of Ithaca by the same way: Penelope was the daughter of Icarius³², her “most powerful father”³³, “glorious”³⁴ and “magnanimous”³⁵; she was also Iphtime’s sister, Eumelus’s³⁶ wife, the king of Pherae whom the Catalog of Ships mentions with great emphasis: “Eumelus, whom a divine woman bare to Admetus,/ Alcestis, Pelias’s most beautiful daughter”³⁷.

We also note that the γέρας was transmissible to the descendants. In fact, Telemachus is considered to be of “royal lineage”³⁸, as the soothsayer Theoclimenus reminds him: “There is no other blood more royal than yours/ among the people of Ithaca: and you will have power forever!”³⁹, not to mention Antinous himself, who shortly thereafter will try to eliminate him by betrayal: “May the son of Cronos never make thee king in sea-girt Ithaca,/ which thing is by birth thy heritage!”⁴⁰.

Instead, Odysseus’s father, Laertes, according to the *Odyssey* is a poor old man, relegated to the fields in miserable conditions: “He, they say, comes no more to the city,/ but afar in the fields suffers woes attended by an aged woman/ as his handmaid, who sets before him food and drink,/ after weariness has laid hold of his limbs,/ as he creeps along the slope of his vineyard plot”⁴¹; but perhaps even more painful is a portrait of him at the end of the *Odyssey*: “He was clothed in a foul tunic/ patched and wretched [...] and on his head a goatskin cap;/ and he nursed his sorrow”⁴².

In short, it does not seem at all that Odysseus could have received his “royal dignity” from such a pathetic figure: instead, one could suspect that what opened the way to the aristocratic marriage of our cunning hero with the daughter of the

³²On this mythical figure, probably introduced in the poem with the precise intent of consolidating the ties between Sparta and the heroic world, we suggest the insights of Marozzi (1998) and Nobili (2009).

³³Πατρός μέγα δυναμένοιο (*Od.* I, 276).

³⁴Τηλεκλειτοῖο (*Od.* XIX, 546).

³⁵Μεγαλήτορος (*Od.* IV, 797).

³⁶Τὴν Εὐμηλος ὅπιε Φερῆς ἐνὶ οἰκίᾳ ναίων (*Od.* IV, 798).

³⁷Εὐμηλος, τὸν ὑπ’ Ἀδμήτῳ τέκε διὰ γυναικῶν/ Ἄλκηστις Πελῖαιο θυγατρῶν εἶδος ἀρίστη (*Il.* II, 714–715).

³⁸Γένος βασιλῆϊον (*Od.* XVI, 401).

³⁹Υμετέρου δ’ οὐκ ἔστι γένος βασιλευτέρον ἄλλο/ ἐν δήμῳ Ἰθάκης, ἀλλ’ ὑμεῖς καρτεροὶ αἰεὶ (*Od.* XV, 533–534). A detailed description of the figure of the soothsayer, the protagonist of *Od.* XX, 345–383, and its divinatory faculties, is due to Broggiato (2003) and Brillante (2014) (and in any case formerly Muñoz Valle 1969).

⁴⁰Μὴ σέ γ’ ἐν ἀμφιάλῳ Ἰθάκῃ βασιλῆα Κρονίων/ ποιήσειεν, ὅ τοι γενεῇ πατρώϊόν ἐστιν (*Od.* I, 386–387). Davies (2001) dwells on this prominent character of the poem, described in the first book as the most handsome but at the same time haughty among the suitors, and probably for this same reason destined to fall first under the blows of the avenger Odysseus.

⁴¹Τὸν οὐκέτι φασὶ πόλινδε/ ἔρχεσθ’, ἀλλ’ ἀπάνευθεν ἐπ’ ἀγροῦ πήματα πάσχειν/ γρηὶ σὺν ἀμφιπόλῳ, ἧ οἱ βρῶσιν τε πόσιν τε/ παρτιθεῖ, εὐτ’ ἄν μιν κάματος κατὰ γυῖα λάβησιν/ ἐρπύζοντ’ ἀνά γουνὸν ἀλωῆς οἰνοπέδοιο (*Od.* I, 189–193).

⁴²Ῥυπόωντα δὲ ἔστο χιτῶνα/ ῥαπτὸν ἀεικέλιον [...] αὐτὰρ ὑπερθεν/ αἰγείην κυνέην κεφαλῇ ἔχε, πένθος ἀέζων (*Od.* XXIV, 227–228; 230–231). The accentuation of vacillating features in Laertes’ figure clearly alludes to the future recovery of power by Odysseus: so Sauzeau 2003. Other useful elements are offered by Sels (2013): the last canto of the *Odyssey* highlights the virtuous restoration of good values in the community as well as the recovery of the leading role by the protagonist, also thanks to the solidity of parental love.

“most powerful” Icarus was wealth he had accumulated before the war, to which the *Odyssey* makes explicit reference: “So truly does Odysseus beyond all mortal men know many gainful ways,/ nor could any mortal beside vie with him”⁴³. This is corroborated by the fact that this precursor of the capitalist mentality – which, not surprisingly, in the *Iliad* is scornfully defined as “greedy for wealth”⁴⁴ by Agamemnon – “verily had an immeasurable wealth, so much/ has no lord either on the dark mainland or in Ithaca itself; nay, not twenty men together/ have wealth so great”⁴⁵.

Incidentally, the idea of the “royal dignity” that Odysseus had acquired through his marriage to Penelope could also explain the hidden meaning of the abduction of Helen and her possessions, which Homer always indicates as the only reason for the Trojan War⁴⁶: in this regard, one should just consider that, according to Greek mythology, the young Menelaus, orphaned Atreus’s son, had been able to access the throne of Sparta by virtue of his marriage to Helen, the daughter of King Tindareus (who in turn was the brother of Penelope’s father, the “most powerful” Icarus).

In fact, one wonders if the abduction of Helen – as well as her subsequent marriage to Paris, who in the *Iliad* is her second husband to all effects – could be exhausted in the context of a sentimental, family, private dimension, or if instead, apart from the obvious negative reflections on Menelaus’ “public image”, this did not compromise his title to be the king of Sparta – which he had acquired precisely by virtue of marriage – with the risk of opening in his reign what nowadays would be called an “institutional crisis”, with unpredictable developments. Incidentally, one should try to imagine what political and military turmoil would have occurred in Europe a few centuries ago if a Queen of England had fled to Moscow with the Tsar’s son.

In short, this could have resulted in the determination of the other Achaean kings – and above all of Menelaus’s elder brother, Agamemnon, who also had become king following his marriage to Clytemnestra, Tyndareus’ eldest daughter – to recover Helen at all costs (not because she was beautiful, but because she was the Queen of Sparta), the only way both to resolve the situation created with the abduction, and to avert a dangerous precedent. On the other hand, even in the *Odyssey* the main point of action is the dispute over a woman, Penelope, disputed among her suitors and her husband. In short, in both the Homeric poems what really is at stake is Power, which has always moved, and often turned into drama, history as well as the stories of men.

In any case, the whole Homeric tale seems to indicate that the kingdom of Ithaca was the inheritance that Penelope had had from her father Icarus. But all of

⁴³Ως περι κέρδεα πολλά κατανητῶν ἀνθρώπων/ οἷδ’ Ὀδυσσεύς, οὐδ’ ἄν τις ἐρίσσειε βροτὸς ἄλλος (Od. XIX, 285–286).

⁴⁴Κερδαλέοφρον (Il. IV, 339).

⁴⁵Ἡ γάρ οἱ ζῶν γ’ ἦν ἄσπετος· οὐ τι νι τόσση/ ἀνδρῶν ἠρώων, οὔτ’ ἠπειροιο μελαίνης/ οὔτ’ αὐτῆς Ἰθάκης· οὐδὲ ξυνεείκοσι φωτῶν/ ἔστ’ ἄφενος τοσσοῦτον (Od. XIV, 96–99).

⁴⁶Il. XXII, 116. On Helen’s abduction and its remarkable anthropological implications, see Calame (2009, 2015). The myth was constantly reformulated according to the different political and religious contexts: this is demonstrated by the poems of Alcman (fr. 1 P.–D. = 3 Cal.), Sappho (fr. 16 V.), Alcaeus (fr. 42 V.) and Stesichorus (fr. 192 P.–D.).

this is contrary to what we know about the ancient Greek kingdoms, whereas it suggests that the Homeric epos could refer to an earlier epoch, which is congruent with the fact that the *Iliad* and the *Odyssey* were created without the help of writing by a poet, or by poets, who were completely ignorant of the techniques of writing (Savino 1989, p. 78). This so archaic characteristic of the two poems, underlined by Geoffrey Kirk of the University of Cambridge, gives us a fundamental key to understanding their content.

As a matter of fact, the scholar gives us another very important piece of information, when he underlines that “a recent linguistic analysis puts forward the hypothesis that the Homeric tmesis, that is the use of detaching adverbial or prepositional elements which in the later language would have constituted an integral part of compound verbs, belongs to a stage of Greek prior to that documented by the Linear B tablets: in this case, the elements of the Homeric language would have to retreat in time, a leap of five hundred years or more compared to the poet’s time” (Savino 1989, 88 f.). This too fits very well with the survey that is emerging now.

In turn, Fritz Graf points out that “the epic tale of myths among the Greeks has its roots in the middle of the third millennium BC, long before the flourishing of the Mycenaean civilization” (Graf 1997, 56), which is corroborated by the fact that “some locations, very important from a mythical point of view, have no background in the Mycenaean past: among them there are the cities of Argos and Sparta, for example, or Ithaca, where Schliemann had in vain searched for a palace of Odysseus; moreover, Mycenaean settlements or palaces without recognizable myths, for example Gla in Boeotia, Asine in Argolis or Miletus; the myth speaks of the Mycenaean colonization of the Ionian Sea as little as the Mycenaean conquest of Minoan Crete. So, Myth and Epos do not draw any reliable portrait of the Mycenaean world” (Graf 1997, p. 52).

Furthermore, Finley states that “the world of Odysseus is not the Mycenaean age of five, six or seven centuries earlier, but neither is it the world of the eighth or seventh century BC” (Finley 1992, p. 30).

All this proves the great antiquity of the oral tradition that was at the origin of the two poems. Not only that: remembering that the *Iliad* and the *Odyssey* were created without the help of writing by a poet, or by poets, who were completely ignorant of the techniques of writing, the difficulty of dating their origin in the eighth century BC, when in Greece alphabetic writing was already in vogue, becomes even more evident, by considering that this was the time when the ancient oral songs from which the two poems had originated were put in writing.

At this point, we are also able to understand why the figure of Homer appears vague and elusive to the point that we know nothing about him and his life: the image of the poet (or, perhaps, of the two poets) hidden behind the two works seem to be shrouded in the mists of prehistory, and their outlines vanish in the dimension of myth. In this regard, Fausto Codino observes that, “if it were possible, we would follow the classic scheme of any preliminary investigation of a literary work: historical background, sources, biography and personality of the author. Unfortunately, we ignore all these things” (Codino 1990, p. 11).

On the other hand, the question of the true identity of the protagonist of the *Odyssey* also fits well into this picture that appears so problematic and full of uncertainties⁴⁷. The Homeric world has very little to do with the much more recent Greek one, where from the very beginning Odysseus's myths were well known: for example, not only Hesiod speaks of Circe, but in the so-called “cup of Nestor”⁴⁸ there is an inscription that could refer to the “beautiful cup [...] adorned with gold studs”⁴⁹ of the Achaean hero⁵⁰.

The world of Homer and that described by the Mycenaean tablets have convergences, but do not identify at all: as Moses Finley states, “the deciphering of the tablets in Linear B and archaeology have destroyed the old orthodoxy” (Finley 1992, XVIII). Such considerations, of course, in our opinion could pave the way for further research on the real origin of the Homeric poems, in particular the *Odyssey*.

In conclusion, a great many congruent and convergent clues seem to substantiate the fact that the true identity of the protagonist of the *Odyssey*, who suddenly reappeared in Ithaca almost twenty years after the beginning of the Trojan War, does not correspond at all to the character of Odysseus as he appears in the narrative of the *Iliad*, but is instead identifiable with the Cretan hero Meriones, who in that war stood out as a formidable fighter and a great archer. So

⁴⁷Furthermore, according to a controversial hypothesis, exposed and debated in a conference held at the “Sapienza” University of Rome in 2012, the Homeric world would be previous, and not subsequent, to the descent of the ancestors of the Hellenes in the Aegean Sea and to the origin of the Mycenaean civilization: in this case, it would go back to at least the first half of the second millennium BC, and it would have had as its original set the Baltic–Scandinavian area, whose geographical, morphological and climatic characteristics could be able to explain many of the contradictions found in the traditional Mediterranean location (Vinci 2013). This is corroborated by the astonishing affinity of the Mycenaean civilization with the Nordic Bronze Age, to the point of having led an archaeologist to define the latter as “a specific and selective Nordic variety of Mycenaean high culture” (Kristiansen and Suchowska–Ducke 2015, p. 371). All of this is also consistent with the fact, noted by all scholars, that the civilization described in the Homeric poems is more rustic and more archaic than the Mycenaean civilization: “the deciphering of the texts in Linear B has shown that between the Mycenaean and iliadic societies there was an absolute difference in size and quality: that one has great wealth, a complex political, administrative and military apparatus, a population divided among many dozen different professional activities, while in the *Iliad* the social division of the work is just beginning to take shape” (Codino 1990, IX). Not surprisingly, the sons of King Priam lead the sheep to pasture “in the gorges of the Ida” (“Ἴδης ἐν κνημοῖσι, *Il.* XI, 106) and before the doors of Odysseus's palace there was “a large quantity of mule and oxen manure” (*Od.* XVII, 297–298).

⁴⁸An archaeological find (*CEG* 454) dating back to the VIII century BC and found in 1955 in the necropolis of San Montano in Lacco Ameno on the island of Ischia.

⁴⁹Δέπας περικαλλές [...] χρυσεῖοις ἤλοισι πεπαρμένον (*Il.* XI, 632–633).

⁵⁰However, according to Dettori (1990–1993), several reasons would lead us to believe that the inscription, consisting of an iambic trimeter and two dactylic hexameters, rather bears the typical features of symposial poetry. See Buchner and Russo (1955), Guarducci (1961), Jourdan–Hemmerdinger (1988), Buchner and Ridgway (2012, reprint from 1993), Valerio (2017). The hypothesis of a great antiquity of the Homeric epos, linked to an oral tradition prior to the introduction of writing in Greece, could also explain the difference between the pantheon of Homer and that of Hesiod, which instead appears insurmountable if one is based on the current chronologies, according to which the two poets are almost contemporaries. On the other hand, all this seems congruent with the observation (also difficult to explain on the basis of current chronologies) that the Homeric world appears much more archaic than the Mycenaean one.

it was this comrade in arms of Odysseus who most likely organized and carried out the slaughter of the suitors at the request of Telemachus, who in fact had left Ithaca shortly before in search of help among his father's old friends to try to solve the problem of Penelope's imminent marriage – which would have compromised his aspiration to become king of Ithaca – by any means. However, subsequently the poet of the *Odyssey* completely misrepresented the facts to make the slaughter of the suitors seem more morally acceptable.

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Assessment Knowledge, Perception, and Behaviors towards Climate Change among Universities Youth in Egypt

*By Azza Ghanem**

Climate change is one of the greatest economic, social, and geopolitical challenges for humans in the coming years. Thus, besides international efforts, youth engagement is vital to environmental conservation and climate action support. Awareness of climate change impacts on human health and all economic activities would help youth to develop positive attitudes towards their environment. This paper assessed university young people's awareness in Egypt by focusing on two aspects. The first aspect is assessing participants' knowledge about climate change which is an obstacle to achieving sustainable development. The second aspect is their behaviors toward climate action. The results can be summarized by the following: the majority are aware of the climate change problem, but it may be necessary to take more steps for building their capacities for facing this future challenge because a deep understanding of the problem is a significant factor for taking shape environmental responsibility.

Keywords: *climate change, awareness, environmental responsibility, environmental education, Egypt*

Introduction

Climate change describes any change in climate over time, as a result of human causes and natural, too. The Intergovernmental Panel on Climate Change (IPCC) clarified that economic activities stand as the major driving force behind the current warming trend since the mid-20th century and proceeding at an unprecedented rate (Edenhofer et al. 2014). Climate change has negative expected impacts, but the vulnerability varies from one place to other. Developing countries, for instance, are the most vulnerable to adverse impacts (Ajuang et al. 2016).

For Egypt, climate change would have potentially negative effects on the ecosystem and economic sectors, causing huge financial losses and social and health problems (Smith et al. 2013). Education and awareness creation of climate change is an important step to achieving adaptation and mitigation strategies as increasing awareness would change behavior towards strengthening the environment and help to face adverse climate change impacts (Acquah 2011, Ekpoh and Ekpoh 2011, Halady and Rao 2010). Moreover, when youth have high levels of awareness of climate change, they are able to educate the citizens of their community and their participation in disaster risk reduction activities could be enhanced (Awusi and Asare 2016, Barreda 2018).

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Universities are considered high-level centers for education so it is not convenient that students are ignorant of important issues such as climate change and its relationship to achieving sustainable development goals (SDGs) (Agboola and Emmanuel 2016). It is not clear whether university youth in Egypt are aware of what climate change is or its effect, hence this study. This study focused on university youth because they will be future decision-makers and be responsible for dealing with serious climate change consequences for the environment, social, and economic conditions. This result would be helpful for policymakers and stakeholders to identify the way that should be used to develop environmental awareness and climate action by providing an assessment of the current level of awareness about climate change.

Methodology

Study Area

This study was carried out in Egypt- an African country- that is located between 22 to about 33°N and 36 to about 24°E (Smith et al. 2013). As illustrated in Figure 1, it is a part of northern Africa and western Asia (Sinai), bordered from the north by the Mediterranean Sea, Sudan to the south, Libya to the west, and the Red Sea to the east. Its climate is semi-desert, meaning hot and dry most of the time, especially in summer and modest winters with little rainfall (Elmenoufy et al. 2017). Due to its unique location, it holds high political and economic prestige in Africa. It is serving as a trade confluence through its Suez channel. Thus, Egypt's economic activities vary in the service sector, tourism, agriculture, trade, and industry. The land area is larger than 995,000 km² with a population of 102 million (The World Bank 2020a), youth (18-29 age) has reached 20 million according to census 2020, with almost 3 million university young people. In general, Egypt has 66 universities out of which 27 are public; the others are private academies and universities (SCU 2021).

Figure 1. Egypt Map



Source: University of Texas Libraries 2021.

According to sampling introduced by Steven K. Thompson, the calculation formula of valid sample size is defined as follows:

$$n = \frac{N \times P (1 - P)}{\{[N - 1 \times (d^2 \div z^2)] + P(1 - P)\}}$$

(Thompson 2012)

Where,

n: Sample size

N: Population size

z: Confidence level at 95% (1.98)

d: Error proportion (0.05)

P: Probability (50%)

The research instrument was a questionnaire titled “Awareness of climate change phenomenon among University youth in Egypt”. The questionnaire was conducted in the Arabic language to facilitate the participants’ understanding of the terminology and then was translated into English. It consisted of 17 close-ended questions, divided into four sections. The first section was information about the participants, including university ownership, education level, and type of study. The second was about their knowledge regarding climate change and sustainable development. The third section provided a ranking of the potential threats to Egyptian society based on severity. The fourth was about participants’ behaviors towards climate action. Finally, an open-ended question was included (optional) if they have any other comments, solutions, or suggestions from their point of view for environmental protection. The online questionnaire was distributed randomly on social media such as Facebook, Linked In, and WhatsApp. In total, 393 responses were collected in a 10 days period. Thus, this analysis was based on 393, which is greater than the minimum valid sample size of 384, meaning the sample satisfies the basic requirements.

The data collected were coded and then analyzed using the Statistical Package for Social Sciences (SPSS) software version 23. Firstly, the data were descriptively analyzed to show a summary of data, such as frequencies, proportions, means, and standard deviations. Because descriptive statistics were not sufficient to determine significant relationships between dependent and independent variables, the Chi-square test was used to determine the association between variables. Statistical significance was set at a 95% confidence level, thus a P value of 0.5 or less ($P \leq 0.05$) was considered statistically significant. The Cronbach’s coefficient to test the reliability of the questionnaire was applied, it was equal to “0.677”, which indicates an acceptable level of reliability based on (Ursachi et al. 2015). The results were presented as graphs, texts, and tables (Tables 1-4, Figures 1-14).

Results

First Section: Profile of Participants

Table 1. Shows the Summary of Participants' Profiles

Category	Sub-category	N	%	Mean	Standard deviation
Level of education	Postgraduate student	104	26.5		
	Graduate	197	50.1		
	Student	92	23.4		
	Total	393	100	1.97	0.706
Ownership of University	Public	358	91.1		
	Private	35	8.9		
	Total	393	100	1.53	0.5
Type of study	Social science	185	47.1		
	Natural science	208	52.9		
	Total	393	100	1.09	0.285

It is obvious that most of the participants are graduates of public universities who have studied natural sciences.

Second Section: Awareness of Climate Change and Sustainable Development

Table 2. Chi-square Test Results to Determine the Relationship "Having Knowledge about Climate Change among Participants with Their Data"

	Education level			Total	χ^2
	postgraduate student	Graduate	Student		
Yes	95	172	80	347	1.281
No	9	25	12	46	
	104	197	92	393	
	Study		Total	χ^2	
	Social science	Natural science			
Yes	160	187	347	1.106	
No	25	21	46		
	185	208	393		
	University		Total	χ^2	
	Public	Private			
Yes	315	32	347	0.365	
No	43	3	46		
	358	35	393		

Results of the chi-square test from Table 2 showed that there is no statistically significant relationship between knowledge of climate change among participants

and their data “Education level, Type of study, and University” since Chi-square had P-Value = 0.527, 0.293, 0.546 respectively that was greater than 0.05.

Figure 1 shows if they had knowledge about climate change. It has appeared that more than 80% of the participants are aware of the phenomenon of climate change.

Figure 1. Having Knowledge about Climate Change

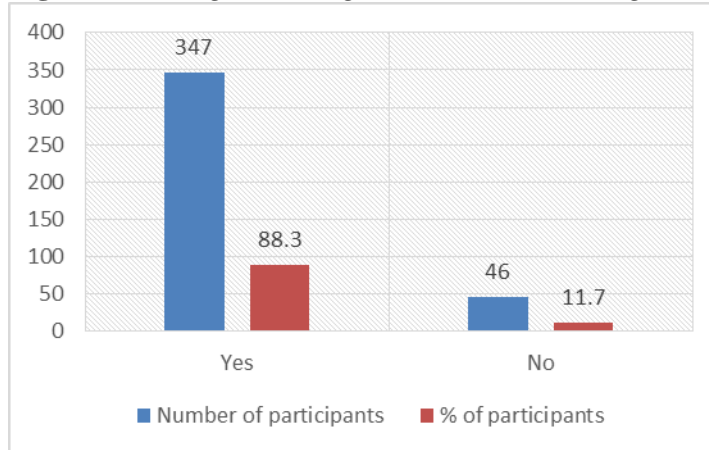


Figure 2 shows asked if they had noticed a rise in the temperature degrees in the past 10 years, and its cause based on their views. Most respondents noticed a change in temperature in the past 10 years and its cause is based on their views. Responses varied either unaware or conscious with different causes of raised temperature. Most of the participants already noticed a temperature change caused by human activities. Noticing temperature changes and other unpredictable weather patterns influence greatly their perceptions of climate change impacts. Thus, awareness programs should be conducted with clarification of climate change scenarios, potential effects, and how to adapt (Shukla et al. 2016).

Figure 2. Opinions Regarding Climate Change Causes

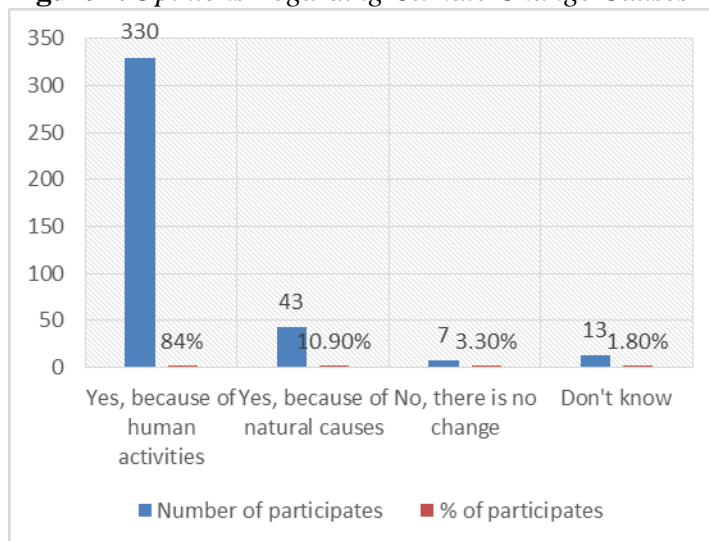


Figure 3 shows the opinions regarding climate change occurrence nowadays. More than 80% believe that it is happening now and more than 2% believe that it is not happening now, while more than 16% do not know to specify their opinion exactly.

Figure 3. *Opinions Regarding Climate Change Occurrence Nowadays*

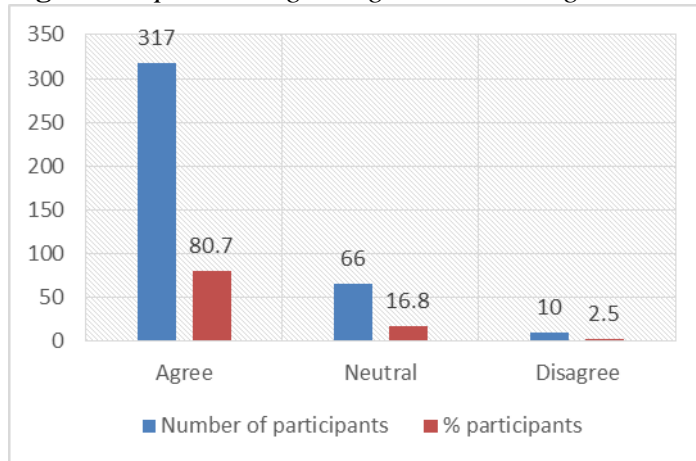


Figure 4 shows if they had known climate change impacts on Egypt. It was found that about 60% of the participants know a little about climate change impacts in Egypt, while more than 10% know nothing. Individuals who feel anxious about the effects of climate change, contribute to environmentally friendly procedures and engage in more climate-friendly actions than those who do not feel affected (Kuthe et al. 2019). This proves that creating awareness among individuals is beneficial for climate action.

Figure 4. *Aware of Climate Change Influences Egypt*

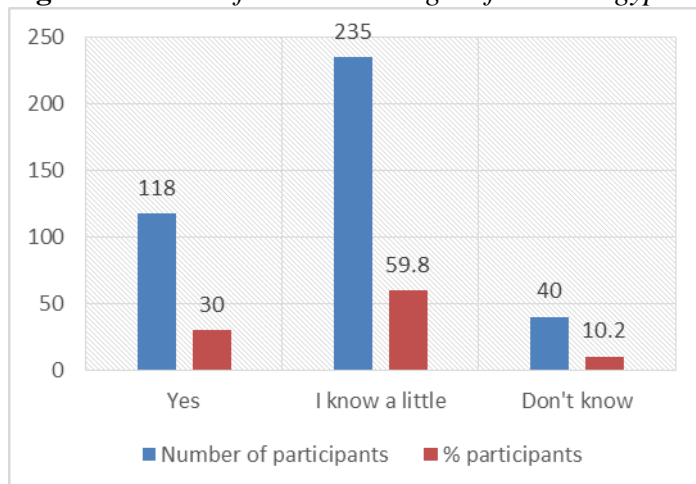
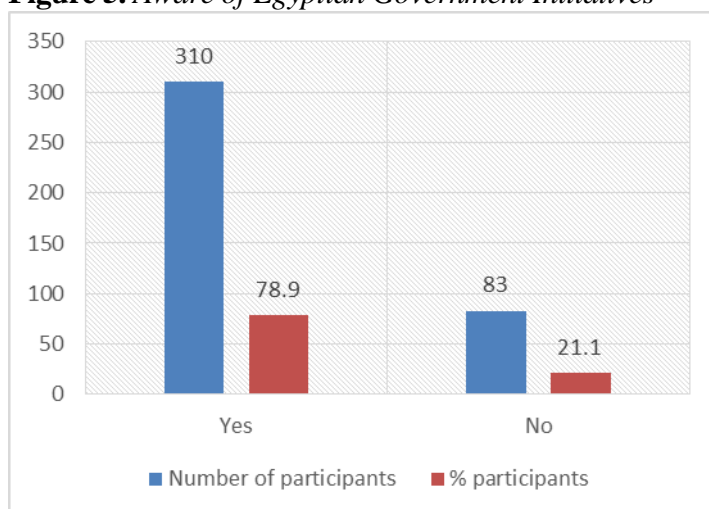


Figure 5 shows if they were aware of the policies or initiatives are taken by the Egyptian government to address climate change. It was found that approximately 80% of the participants know nothing about Egypt's policies and recent initiatives toward climate action.

Figure 5. *Aware of Egyptian Government Initiatives***Table 3.** *Chi-square Test Results to Determine the Relationship “Having Knowledge about Sustainable Development and its Goals among Participants and Their Data”*

	Education level			Total	χ^2
	postgraduate student	Graduate	Student		
Yes	59	64	19	142	33.731
No	12	60	28	100	
I know a little	33	73	45	151	
	104	197	92	393	
	Study		Total	χ^2	
	Humanities and social	Science			
Yes	61	81	142	1.962	
No	52	48	100		
I know a little	72	79	151		
	185	208	393		
	University		Total	χ^2	
	Governmental	Private			
Yes	132	10	142	4.296	
No	86	14	100		
I know a little	140	11	151		
	358	35	393		

Results of the Chi-square test from Table 3 showed that there is no statistically significant between knowledge of sustainable development and its goals with their data “type of study and University” since Chi-square had a P-Value = 0.375, 0.117 respectively greater than 0.05.

On the other hand, there is a correlation between knowledge of sustainable development and its goals with participants’ education level because the result was highly significant as a P-Value = 0.000 lower than 0.05.

Figure 6 shows if they had known the concept of sustainable development and its goals (SDGs). Most of the participants either know well or know little about the concept of sustainable development and its goals, while 25.1% of them know absolutely nothing.

Figure 6. Understanding Sustainable Development Concept and SDGs

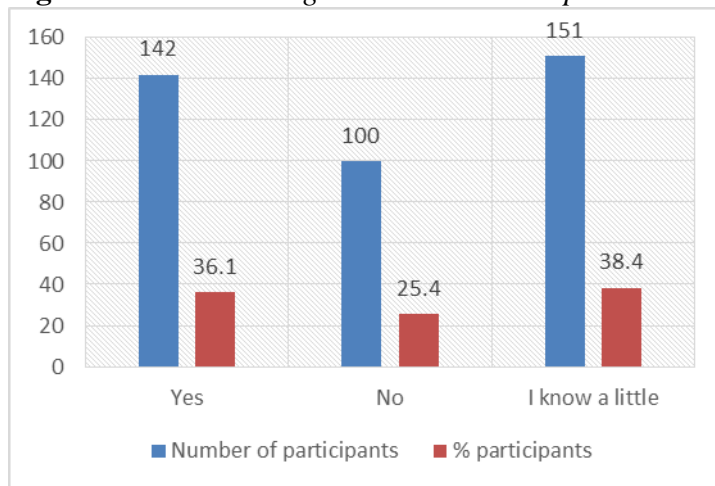


Figure 7 shows if climate change is a challenge to achieving sustainable development goals (SDGs) in Egypt. The majority of respondents have considered climate change as an obstacle.

Figure 7. Opinions about Climate Change as a Challenge to Achieve SDGs in Egypt

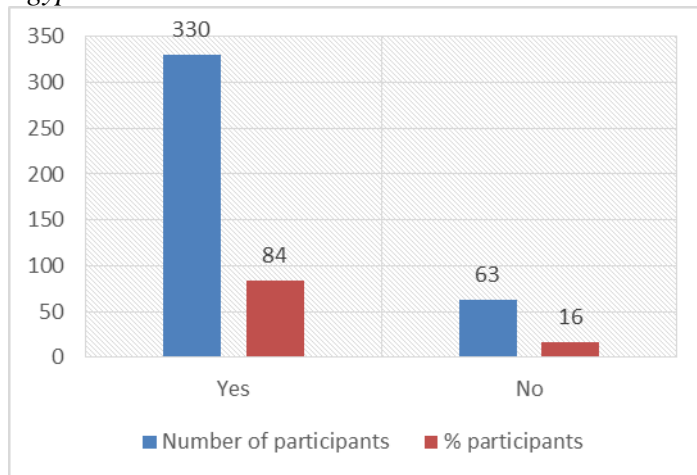


Figure 8 shows if they had studied or attended an event about climate change during the university period. It was found that the ratio is approximately equal between yes and no, but the percentage of those who did not study or attend events on the phenomenon of climate change is greater.

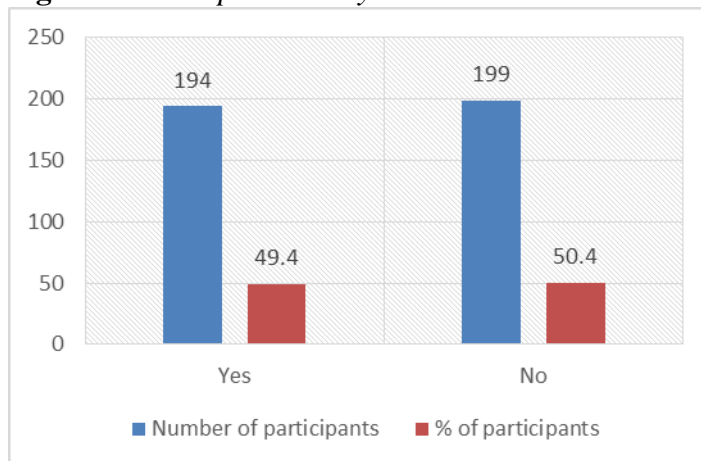
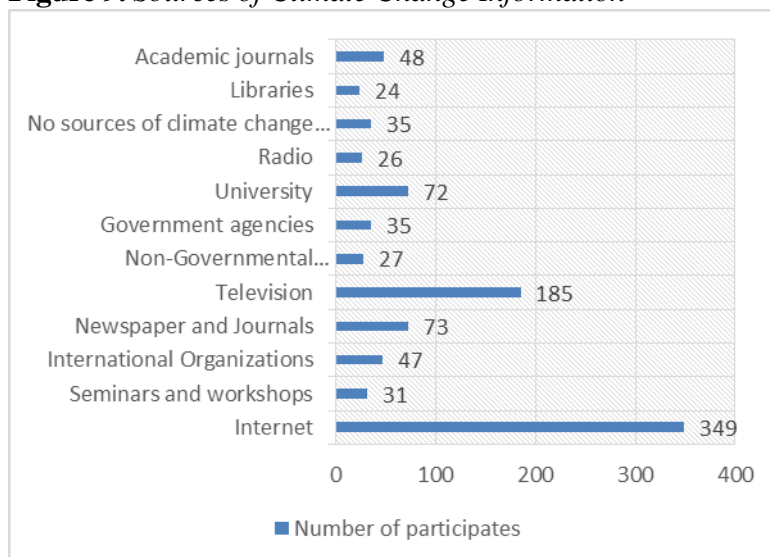
Figure 8. Participants' Study or Attendance Events about Climate Change

Figure 9 shows the three main sources of information about climate change. It is obvious that both the Internet and television are the most important sources that can be exploited in campaigns, initiatives, and programs to raise public awareness. Media has a positive impact on climate action both directly via changing daily behaviors in short term, and indirectly via changing lifestyles in long term and boosting attitudes towards climate change (Arlt et al. 2011). Nowadays, social media platforms like Facebook, Twitter, and YouTube, for instance, play a vital way to in awareness rise towards the environment, enhance daily climate-related behavior, and inspire youth to contribute to climate action (Duran-Becerra et al. 2020, Hamid et al. 2017). Additionally, television is considered an influential way - if the content is of high quality - to inform climate change and other environmental issues as it has visual and audio effects attracting people (Otinga 2014).

Figure 9. Sources of Climate Change Information

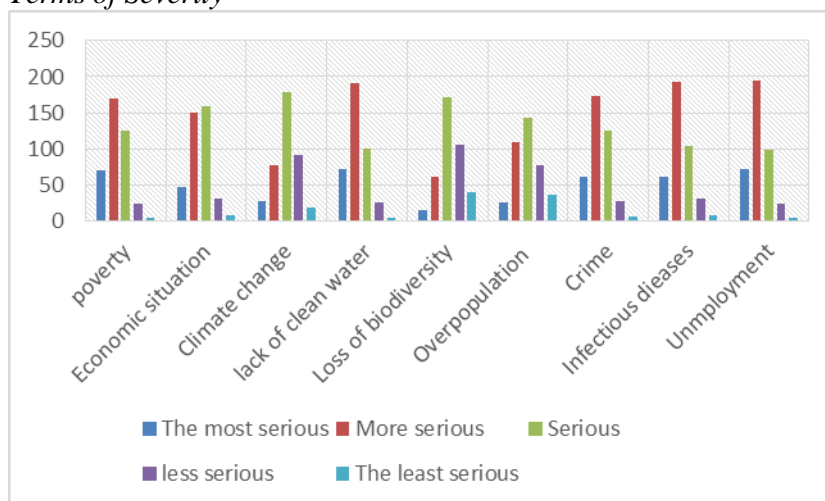
Third Section: The Most Serious Problem in the Egyptian Society

Table 4. Shows their Opinions Regarding the Most Serious Issue Threatening Egyptian Society

The problem	The most serious	More serious	Serious	Less serious	The least serious
Poverty	70	170	125	23	5
Economic situation	46	150	159	31	7
Climate change	27	77	178	92	19
Lack of clean water	71	191	100	26	5
Loss of biodiversity	15	62	171	105	40
Overpopulation	26	110	143	77	37
Crime	61	174	125	27	6
Infectious diseases	61	192	103	30	7
Unemployment	71	194	99	24	5

Figure 10 presents participants' views of climate change as a serious but not the most serious problem. Rather, the most serious problems are unemployment and lack of clean water, followed by poverty.

In my opinion, each young person has expressed his concrete fears that he suffers from in his daily life as the most serious problems and maybe expect that these problems will persist in the short term and threaten his well-being. As for the climate change problem, as was noted in the previous answer, about 60% of participants know little about climate change impacts on Egypt. Thus, the youth does not know that climate change in the long term may affect his well-being and even exacerbate the problems he currently fears, such as the lack of clean water, unemployment, and poverty.

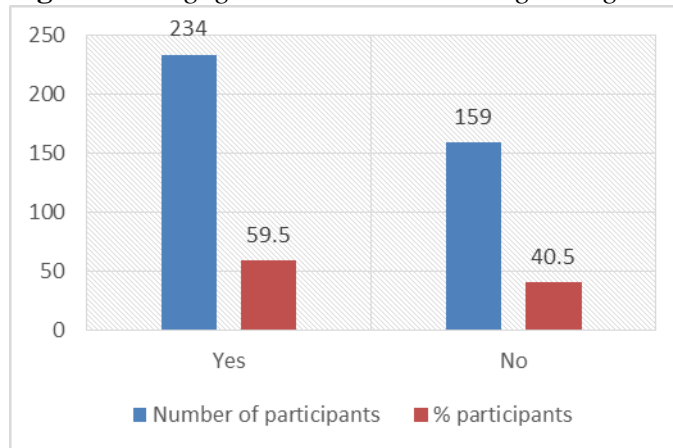
Figure 10. Participant's Classification for the Egyptian Society Problems in Terms of Severity

Fourth Section: Behavioral Aspects Analyzing Climate Action

Figure 11 shows if they had participated in activities to mitigate climate change, such as planting trees in Egypt's streets or rationalization of energy consumption via reducing the amount of energy used and using energy-saving appliances in their houses. The majority of participants indeed are positive persons and do actions to reduce emissions. It is worth noting that in recent years the Egyptian government has already encouraged consumers to use energy-saving lamps.

As known that electricity generation depends on burning fossil fuels that cause climate change. Encouraging the household is an important step as behavioral change households undertake may reduce more than 4% of the CO₂ emissions that are released as a result of residential energy demand. Motivate citizens to use energy-efficient appliances, which lead to energy savings (Lin 2015, Niamir and Filatova 2016).

Figure 11. *Engagement in Climate Change Mitigation Activities*



Whilst many countries have ambitious targets exist to raise renewables in many countries, social acceptance may be an obstacle to achieving this. Social acceptance means involving the public to make decisions regarding renewable projects (Zoellner et al. 2008). The public's decision-making depends on their perception of the potential costs, benefits, risks, and of the project. Renewable energy, for instance, wind and solar have many benefits: meeting electricity demand, sustainability, reducing emissions and providing job opportunities. Egypt seeks to implement its renewable strategy to achieve socio-economic benefits and mitigate climate change impacts too (Al-Salaymeh et al. 2016). Figure 12 shows if university youth are willing to pay more for energy produced from renewable energy. Acceptance is very auspicious, more than 80% would willing to pay if prices are reasonable and the sources are guaranteed.

Figure 12. Participants’ Opinions to Pay More for Renewable Energy

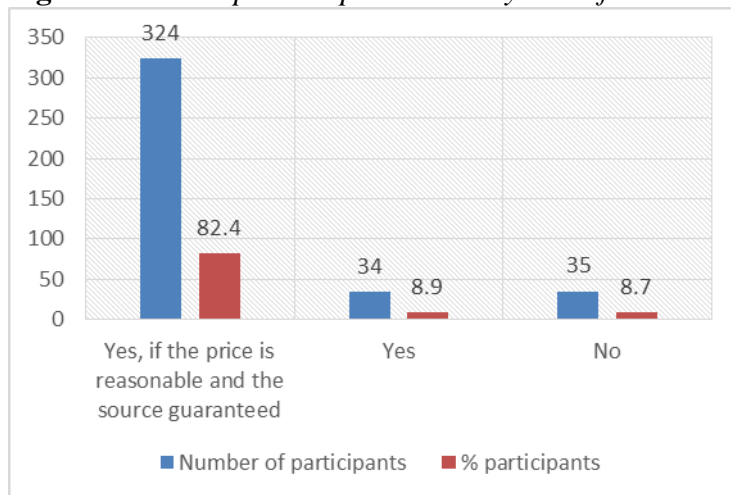
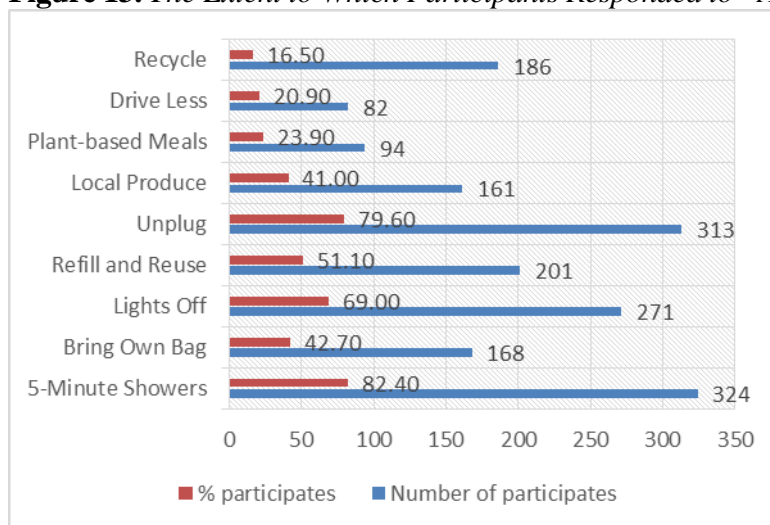


Figure 13 presents participants’ responses to the United Nations ‘Act Now’ campaign for individual action on climate change and sustainability. This campaign’s objective is to encourage individuals to preserve the environment and conduct simple actions to address climate challenges and build a more sustainable world. The results are promising and positive, meaning youth are aware of the importance of preserving the environment in relation to making daily decisions, such as saving energy and water and reusing materials.

Figure 13. The Extent to Which Participants Responded to “Act Now” Campaign

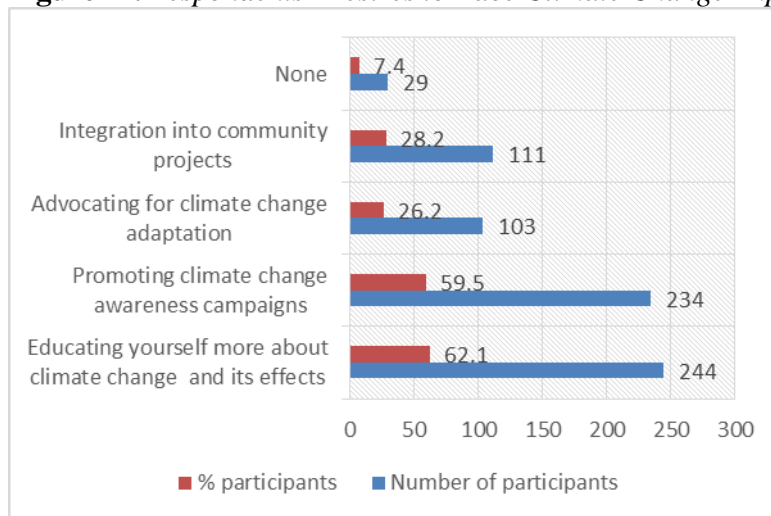


Youth is a fundament for each change. The majority of participants are positive and enthusiastic about climate action. Figure 14 expressed participants’ future desires to participate in climate action in all possible ways. They prefer being an effective part of the community to implement projects that would mitigate or adapt to climate change, such as urban gardening, for instance.

Additionally, they preferred to be a part of campaigns to raise awareness of climate change. It is worth noting that Egypt has various environmental youth

initiatives, especially for climate change issues. They also want to educate themselves about the problem and its effects on Egypt.

Figure 14. Respondents' Desires to Face Climate Change Impacts in Egypt



Discussion

Achieving climate goals requires drastic changes in the ways of production and human lifestyles (Kang et al. 2020), creating awareness among young people would contribute to tackling the effects of climate change and related problems. As mentioned that radical changes in individuals' behavior would mitigate climate change impacts. That means that public opinion is important while developing effective climate policy. A study indicated that exposure to the Conference of the Parties (COP) news raises climate change awareness (Bakaki and Bernauer 2017). Thus, I think Egypt has a valuable opportunity to be aware of the public via various media means, as COP 24 will be held in Egypt in November 2022. Hence, this study was to assess awareness levels regarding climate change, so I conducted a questionnaire to provide information on their knowledge and attitudes to reinforce local mitigation.

This study indicated that the majority of participants were aware of climate change, meaning that government and individual efforts to develop environmental awareness have met with success. Some participants commented that heavy industrial releases, burning fuel, and cutting trees from the streets are among the human activities responsible for global warming exacerbation. They also mentioned the importance of including climate change lessons into both the tertiary and school education curriculum to create a good awareness. Actually, climate topics inclusion in educational programs and conducting classroom activities play an effective role in increasing awareness levels (Abuelgasim and Daiban 2017). In Nigeria, for instance, it was found that students who studied geography have a high-level aware level of climate change (Onuoha et al. 2021).

As a result of the high awareness level, they are involved positively to conserve the environment including but not limited to gardening, rationalizing energy and water consumption, and recycling. Among these youth may find teachers, agronomists, and others. Therefore, in my opinion, these youth's enthusiasm can be exploited and build their capacities to engage in raising awareness of the public, especially in rural areas.

Nudge is a method that aims to guide people's choices in specific directions. Improving public transportation infrastructure and using energy-saving appliances are examples of nudges. A nudge can change consumers' behaviors to reduce energy consumption, and thus minimize emissions as Thaler indicated in the Nudge theory by Richard H. Thaler (Thaler and Sunstein 2008). Thus, I recommend conducting studies about the effective actions toward sustainable consumption in Egypt.

Renewables play a significant role to mitigate climate change impacts, but climate change may affect them, too (Ebinger and Vergara 2011). Thus, I recommend conducting more research to assess climate change impacts on renewables in Egypt.

The most important source to get information about climate change is the Internet via "blogs, social media platforms, and YouTube", followed by television which can be exploited to increase environmental awareness levels and build their capacity.

Actually, access status to the Internet has improved; reaching 72% of the Egyptian population and 49% are active on social media platforms, especially Facebook (NAOS 2022, The World Bank 2020b). The digital divide among youth reduced in recent years as their usage of mobile phones to access the Internet (Badran 2014). In my opinion, the most appropriate means is YouTube if the content is simple with high quality. YouTube can display information, graphics, and pictures that all enhance the audience's understanding. Additionally, it is easy to follow up and interact with the content, whether by youth or the public. I recommend conducting futuristic studies about how the extent of the Internet's effectiveness to boost climate change awareness.

Participants have expressed concern regarding different problems in Egyptian society, rating the socio-economic problems such as unemployment as more serious than the environmental problems.

Conclusion

This study revealed that awareness levels about climate change are high among university youth, although some participants know nothing about the phenomenon and its impacts on their lives. Thus, there is a need for well-tailored awareness campaigns to raise environmental awareness, especially, regarding the climate change problem that would contribute to enhancing mitigative and adaptive capacity.

Raising the awareness process can be done in three ways. Firstly, integrating climate change topics into the educational curricula. Secondly, exploitation of

youth capabilities to conduct environmental initiatives to aware the public, especially in rural regions. Lastly, the Internet can be harnessed to conduct more environmental seminars to raise awareness levels, especially as it has become familiar to all students as part of academic activities after the COVID-19 crisis.

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“Yet even now, when he marked Odysseus standing near, / he wagged his tail and dropped both his ears” (δὴ τότε γ', ὡς ἐνόησεν Ὀδυσσεῖα ἐγγυς ἐόντα, / οὐρῆ μὲν ῥ' ὄ γ' ἔσηνε καὶ οὐατα κάββαλεν ἄμφω, *Od.* XVII, 301–302).