J - READING

JOURNAL OF RESEARCH AND DIDACTICS IN

GEOGRAPHY

homepage: www.j-reading.org

Ocean citizenship. The time to adopt a useful concept for environmental teaching and citizenship education is now

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Abstract

The sea is undeniably the unique heritage shared among the world's inhabitants. Most people seem to identify very little or no connection between their activities and the future of the ocean. However, a well-preserved ocean may enhance and protect human wellbeing. In this perspective, sea education is a meaningful tool to inspire a sense of attachment and personal responsibility that can be translated as ocean citizenship (OC). There is considerable support in the literature debate to recommend further investigations on this topic and scholars seem to agree with the need to develop sea literacy as a key factor to water preservation and ocean environments. In Italy, the debate is quite far from being fully taken into consideration, despite its 7,500 km of coasts and the need to save the Mediterranean Sea habitat. Despite its importance, the sea is a big absentee in the geography of Italian schools, as well as in environmental education conducted in and out of the school system. This work resonates with the recent overseas studies and aims at relaunching the discussion on the meaning of ocean citizenship to provide an opportunity to develop OC in terms of environmental and citizen education.

1. Introduction

In the 2007 Coastal Management, Stephen Fletcher and Jonathan Potts published an article entitled "Ocean Citizenship: An Emergent Geographical Concept" addressing the necessity of affirming "ocean citizenship" (OC). A decade ago, this was considered as an emerging concept as the result of a close relation between our everyday lives and the health of the coastal and marine environment. As pointed out in the study, informed lifestyle choices may positively affect the sea and therefore human beings have a great responsibility in minimizing negative impacts

while ameliorating large-scale geographical problems that in some cases may appear insuperable. In so doing, geography was promoted to have a meaningful role as also reported in a lively academic debate that has developed in an Anglophone context since then. In order to create and spread the concept of ocean citizenship, various scholars have been outlining the limits as well as the possible solutions. In 2004, one of the first pieces of research on the subject of sea and citizenship reported the US Pew Ocean Commission data, identifying the need to improve public literacy about ocean issues (Steel, et al., 2005). Attention was focused on developing public support thorough public knowledge, while other findings suggested that internet and the media may have played a key role in enhancing sea awareness at different levels among citizens. Later, in the journal "Aquatic Conservation Marine and Freshwater Ecosystems" (Vincent, 2011) levels of criticality emerged as an outcome of previous studies carried out in Mexico, Portugal and Ireland. The world's sea was scarcely acknowledged by a large part of interviewees, specifically regarding the quality of marine waters, ocean conservation and pollution issues. According to Vincent we should address the reality that too few people act in support of the ocean (2011). The key to people's commitment to marine conservation lies in making the ocean seem familiar so that its care becomes a matter of personal responsibility rather than an abstract notion and a tiresome chore. Similarly, Voyer et al. (2012) affirm that we need to feel the ocean as "a part of me". Most people seem to see very little or no connection between their activities and the future of the ocean (Pew Oceans Commission, 2004), even though a well preserved ocean may guarantee food, coastal protection and climate control, all key factors for human wellbeing.

In this perspective, sea education can represent a meaningful tool to inspire a sense of attachment and personal responsibility that in McKinley and Fletcher's (2010) view can be translated into the concept of ocean citizenship. Furthermore, Marmoree and Conk (2009) explore how US individuals perceive the ocean providing a number of meaningful and sharp insights. Accordingly, while for some interviewees oceans represent the main source of fun, food and

inspiration, for others it is paired with hurricanes and natural disasters. Interestingly, most of the individuals involved do not seem to recognize the sea as the most significant element in climate control, and in oxygen provision, an essential and vital constituent for the Earth as well as for the economy and a wide range of human activities. In other words, one of the most important observations made in the existing studies seems to concern the fact that the real benefit for the ocean lies in how humans connect to the sea. Although the largest part of the studies underline that citizens' attentiveness is quite limited and sea issues represent marginal concerns, other research suggests that where awareness is well developed, best practice and virtuous behaviour are increasingly carried out (Fletcher et al., 2012; Guest, Wallance and Lotze, 2015; Haklay, 2002; McKinley, 2011; McKinley and Fletcher, 2010; Fletcher and Potts, 2007; Fletcher et al., 2009; Steel et al., 2005; Voyer et al., 2015).

While overseas scholars all agree with the need to develop sea literacy as a key factor in water preservation and ocean environments, in Italy the debate is still quite far from being fully taken into consideration even with its 7,500 km of coasts and the need to save the Mediterranean Sea environment. In order to first of all accept and then to apply the idea of ocean citizenship, as already outlined in the foreign literature debate, consistent educational action supported by formally appointed institutions and informal actors must be championed.

With this contribution we aim to take into account a research project addressed to encourage an OC scientific debate. Therefore, in this perspective this article is to be intended as a working agenda based on preliminary findings explaining the reasons why it is necessary to adopt OC by formal and informal education actors and bodies. The research has visually and textually investigated a number of geography school books with the support of primary and secondary school teachers working in the Italian education system and in this early phase it presents a set of preliminary data. It finally suggests possible steps along which the project could be further developed.

2. From the citizenship concept to the ocean citizenship

The concept of citizenship has been applied in three ways. Firstly, as a political status characterizing a person with regard to the state, secondly as a sense of belonging and individual political capacity within a specific community, lastly as a personal attitude that encourages a person to act for their community's sake and consequently for the safety (or improvement) of their community's territory. In the latter case citizenship goes beyond a juridical status and meets the individual will – or association of individuals – to look after the whole community heritage. According to international maritime law, in the United Nations *Convention on the Law of the Sea[1]*, also known as the "Montego Bay Convention", coastal states exert a decreasing sovereignty up to a limit of 200 nautical miles, beyond which the high sea extends. This is considered human world heritage. Affirming that a part of the Earth's surface is world heritage, it implies that each state has the right to use that specific space. Moreover, at least theoretically, it also means that continental states have the right to enjoy the benefits from sea exploitation. All the same, each individual, as a member of the human community besides belonging to a specific nationality, is entitled to avail of their rights[2]. If a common heritage exists, a participatory will may also exist to manage it along with the desire to be committed to its preservation and improvement.

In the light of what we have so far examined, this may be defined as a form of citizenship, or to use Fletchers and Potts' words, *Ocean Citizenship.* Theoretically speaking, as individuals, we all share rights on the sea that are connected to duties in terms of respecting this space together with the community of human beings. If the relation of individual "rights-duties" referring to one's community can be envisioned as one the key elements in the citizenship relationship, in this context the ocean citizenship idea is even more reinforced and takes on a renewed character: collective and individual sea responsibility. The Universal Declaration of Human Rights (1948)

sponsored the idea of universal citizenship and obtained a first legal framework promoting a superior level of citizens' rights and duties than those enjoyed in the national state, beyond the national belonging. On the other hand, ocean citizenship is the result of the relationship between a person and a space, a territory which is not – fully – exposed and subject to the state jurisdiction even if that person has not yet visited it, or if they live miles away from the sea.

This type of citizenship can be considered revolutionary – perhaps utopian – for being independent from the state, as it chiefly assumes the form of environmental citizenship, that is to say, a personal commitment to deepen the knowledge of elements and dynamics affecting the environment accompanied by a more responsible conduct and lifestyle choices. This specific form of citizenship, we believe, is suitable to be applied to most of our planet's surface: the sea.

3. The need for ocean citizenship education

The difficulties encountered in sharing the idea of OC are mainly due to cultural elements in those human communities settled far from the sea. Its physical distance may be the limit to projecting feelings and sense of belonging. This may in other cases inspire care and affection for the marine environment if we consider that literature and cinema have often located their stories, transforming the sea into a symbolic place (Mack, 2012; Squarcina, 2015).

Another critical point is rooted in the fact that caring for the sea may often involve virtuous mainland citizens whose actions do not appear tangible in the immediate lapse of time. The delayed verifiability – spatially/temporal – between action and result makes the adoption of best practice and good habits even more difficult. For example, the relation between the indiscriminate use of disposable plastic goods and marine contamination is not self-evident as

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[1] http://www.un.org/depts/los/convention_agreements /texts/unclos/unclos_e.pdf.

[2] At the same time, a contradiction is present in the cited convention. In the high seas, boats and ships need to be

inscribed to the national sea register to be identified by any military entities. This may underline how sea national rules may limit individual rights to use high sea waters.

stated by Moore and Phillips (2011) as well as the abuse of cleaning chemicals detergents in a lowland and the eutrophication phenomenon hundreds of miles away. Thus, Wilcox et al. (2016) define the ocean plastic issue as a "silent threat" for the ecosystem as the result of a 30 year data collection on the occasion of public cleaning events on beaches and coasts. This issue is particularly felt by international environmental associations such as Green Peace.

Another challenging point derives from the Westphalian concept of the modern state, as the main holder of political power which is still considered the only entity capable of acting on a large scale with coercive capacity. Since the last century, this has taken place at least in Western democracies, despite the claim that international organizations and public opinion exerted their influence. Owing to their constitutive features as territorial controlling entities, along with political expediency, states tend to prefer the so-called national interests, which often correspond to the political and economic interests of the hegemonic actors of the nation, which frequently conflict with the adoption of environmental protection measures, especially if these relate to a distant environment such as the high seas. On the other hand, jurisdiction is exerted only in their territory and they are unprepared, or in some cases inadequately prepared, to intervene in those distant areas for reasons which do not correspond to economic or political interests. The same international organizations appear as mere round tables where States discuss those resolutions entrusted by the individual state decisions. Though not formally, states are less likely to apply interventions affecting their balances, which do not provide immediate benefits to their interests, do not involve the public opinion, or which are against their economic interests. All the same, there are few States with such an economic, technological and cultural power that are capable of taking action in enforcing international conventions in the high seas. In this way, it remains a space where most of the crimes are committed against the marine environment. A good example of this is the International Convention for the Prevention of Pollution from

Ships, 1973 later modified by the Protocol of 1978 (MARPOL 73/78), and promoted by the International Maritime Organization (IMO). It sets down the prohibition for all ships to discharge waste into waters and pollute the marine environment. MARPOL 73/78 applies to oil tankers, cruise ships, general cargo and container vessels, tugs, ferries, yachts and small pleasure craft. The objective of the convention is to reduce the volumes of harmful materials entering the world's ocean and the marine environment. Ships have traditionally discharged all their waste into the sea. In the past, this waste was mainly foodstuffs, timber and packaging materials, ship's gear and lost cargo. More recently it has included oils, chemicals, plastics and other materials which may float, are not biodegradable, extremely persistent and which deteriorate very slowly. MARPOL 73/78 requires that ships retain all the waste on board until reaching port. However, certain waste can be discharged under certain conditions such as the distance from shore, the type of waste and the condition of the waste. MARPOL 73/78 requires that countries provide adequate reception facilities in all their ports, harbors and anchorages[3].

The Convention provisions rely on state inspections and prescriptive capacities. These are often very poor, in some cases deliberately poor in application, since enrollment in the national shipping registers, as well as periodic inspections may represent an underestimated source of economic income. Similarly, inspections are mainly carried out when ships are in the port, this however does not prevent them from washing tanks or dispersing military, civil, industrial refuse, fishing equipment etc. In addition, despite the progressive biological impoverishment of the sea caused by industrial fishing, we are still far from finding an effective remedy to overfishing (Callegari, 2007). As a matter of fact, the richest countries' fishing fleets, even though signing fishing limitation conventions are indiscriminately looting world fish stocks and seriously damaging traditional fishing activities.

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[3]See full version at http://documents.worldbank.org/curated/en/860841468330898141/MARPOL-73-78-

International-Convention-for-the-Prevention-of-Pollution-from-Ships.

Moreover, a sustainable development paradigm seems insufficient to justify a change of attitude with regard to marine areas and environmental problems. The idea of sustainable development has a reference policy document in Agenda 21, whose philosophy is rooted in local action for global conservation. The sea's distance felt by a large part of human communities, whether physical or psychological, can represent an extra difficulty in perceiving the marine fragility, the need to defend this environment or to simply realize the idea that it provides most of the oxygen we breathe through the photosynthesis of microscopic algae (Louchet, 2014).

Given the current scientific debate, we argue that the adoption of the idea of ocean citizenship could help to raise awareness also in campaigning to implement national safeguard policies and repressive measures against those conducts that may harm the marine heritage (McKinley and Fletcher, 2010, 2011, 2012). To respond to the sea environmental question the most realistic option seems to be more idealistic: a cultural revolution. Promoting ocean citizenship could spread the idea of individual and collective responsibility towards this vast and unique part of the planetary surface.

4. Actions for Ocean Citizenship

In UNESCO's natural science section webpage, it is declared that we should add some blue into the economy of the green in order to know the ocean, by preserving our marine treasures and reinforcing ocean citizenship. It also states that society must be committed in the definition of a shared future of the sea while acting in favor of a real change. This will not be possible without a great transformation of human behaviour which only seems to be feasible through education and ocean consciousness[4]. UNESCO, along with a number of intergovernmental agencies, has sponsored conferences, seminars, campaigns and publications and plans on the subjects of the sea and coastal warming. In the education fields, different international non-profit organizations are networking with education institutions,

aquariums, scientific centers and natural science museums (Ballantyne, 2004; Kim, 2014), NGOs (Howe, 2001; Calado et al., 2012), supporting sea world knowledge and are taking action to foster public awareness with several events such as the celebration of the World Oceans Day (8th of June) or the creation of ocean citizenship passports.

5. Ocean citizenship in Italy

In Italy, despite being embraced by the Mediterranean Sea, little debate is devoted to sea issues. In the past for example, the "colonization" of the littoral areas emerged only after national unity in the 19th century, when land reclaims were planned and portions of the population were displaced to the coasts (Mioni, 1978). Apart from the bombastic fascist hegemonic claims, Italian politics has shown little interest in the sea. In general, Italians consider this space playfully or economically profitable, the sea basically meaning holiday (Frascani, 2008). Given this, the role of sea literacy therefore seems particularly important, and despite the main national educational agency known as MIUR[5], the school seems reluctant to pursue marine environmental education and to spread the idea of ocean citizenship. *Indicazioni nazionali per il curricolo della scuola dell'infanzia e del primo ciclo d'istruzione* (MIUR, 2012) the official ministerial education document for Italian schools and teachers states that the most important issues affecting our continent and humanity nowadays cannot be addressed and resolved within the traditional national boundaries, but only through the understanding of being part of the great common traditions, of a single European community destiny as well as of a single common planetary destiny. In a second passage of the text it also declares: "On the one hand everything that happens in the world affects every person's life; on the other hand, each person holds in his/her own hands a unique and singular responsibility towards the future of humanity".

From a methodological point of view, this first stage of the research has adopted a comparative perspective taking into account possible discre-

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[4] www.unesco.org/new/fr/natural-sciences/ioc-oceans/.

[5] Here we refer to Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR) – http://www.miur.gov.it.

pancies resulting from school books and ministerial documents. A preliminary content analysis was based on a set of ministerial documents – such as *Linee guida e Indicazioni nazionali* – and around 30 primary school textbooks. The books investigated were published between 2009 and 2016 and are still in use in Italian schools by students from grade 3 to grade 5[6]. Along with this, we interviewed 10 primary school teachers (8 female – 2 male) who had full access to 24 classes. According to our preliminary analysis, the idea of citizenship proposed by the MIUR document is circumscribed to a specific territory and to the national culture, at the most it comprises the European Union, while completely neglecting the global scale. Ocean citizenship does not seem to be included and nor does the high sea. Moreover, while teaching to care for the environment is presented as a priority, we deduced that the "environment" referred to is essentially conceived as a space surrounding pupils' life rather than a global milieu, or the earthly habitat and certainly not the marine environment. After all, the sea and the ocean are just mentioned in the "milestones for the development of skills at the end of primary school" merely as physical geography objects to be recognized or in the "Learning objectives at the end of the fifth primary school grade" as geography elements to be known in terms of "main general features" (MIUR, 2015).

Furthermore, the guidelines for environmental education and sustainable development (Ministry of Education, University and Research and the Ministry for the Environment, Land and Sea, 2015) are a document that aims "to provide some innovative recommendations on environmental and sustainable development education for the elaboration of curricula by the educational institutions and for the organization of educational and teaching activities". This form pays more attention to explaining and justifying the need for the inclusion of environmental education in the school system according to the sustainable development paradigm. It also defines it as a proper education tool to be applied

through actions aimed at innovating the lifestyles and people's behaviour to protect the environment.

The second part of the text is mainly focused on educational courses. In particular, the very first document section dwells on the "Protection of water and the sea" where teaching activities are provided for Nursery School and Primary School; instead other environmental issues are broadly developed for the Secondary Schools. In analyzing the section devoted to water and the sea, it resulted that sea issues appear to be quite overshadowed by freshwater issues. The sea is essentially presented as a climate controller and as a food resource, while no mention is given to the role played by the sea in supplying oxygen, absorbing carbon dioxide or in providing biodiversity. Moreover, no information is provided on the key role of the sea played in the economic and cultural exchanges between different people during the ages. Least of all, the sea is regarded as a symbolic and emotional space, although the first part of the document states that in order to intervene on the environment is also necessary "to establish a connection with it from an emotional point of view and thus with our deepest parts".

Finally, it is also declared that in the nursery school, children are encouraged to develop key skills to establish an emotional relationship with marine ecosystems. The third part of the document is instead devoted to several "in-depth explanation sheets", one of which is dedicated to the "Protection of the Sea". Even in this section, the topic seems quite superficially dealt with and limited to a mere list of key marine physical environment features with specific reference to the Mediterranean basin; a brief part is devoted to possible actions and strategies that the Italian state authorities and other supranational organizations have adopted to defend the sea.

Although a certain amount of attention seems to be devoted to the restoration and enhancement of the maritime character, no targeted strategies are suggested to approach citizens, or the youngest among them, in creating ocean

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[6] Amulfi M., 2009; Amulfi M., 2013; Ri.Cer.Ca., 2009; Strano L., 2016; Valdiserra L., 2011; Valdiserra L., 2014; VV.AA., 2009a; VV.AA., 2009b; VV.AA., 2014; VV.AA., 2015; VV.AA., 2016a; VV.AA., 2016b; VV.AA., 2016c.

citizenship. Hence, those proclaimed didactic actions seem to be still quite underdeveloped with reference to the promotion of a rich knowledge that may encourage an affective appropriation of the sea by students. More precisely, the connection between the protection of the sea and global citizenship seems to be missing. In contrast, in our view this would be a key factor for the realization, also in spatial terms, of an ethically valuable idea that comprises a human community capable of going beyond national citizenship. We also believe that adopting a more critical and extensive approach to the sea may overcome the risk that education guidelines and school programs may end up in an outlook of ethnocentrism, sentimentalism and pietism.

Likewise, several recommendations on geography teaching (Schmidt die Friedberg, 2005; Giorda, 2006; Malatesta, 2010; De Vecchis, 2011; Giorda, 2014 etc.) have provided detailed insights, later embraced by MIUR, such as spatial analysis and the affective appropriation of the nearby space as a starting point to explore the larger scale. Nonetheless, in Italian primary schools, spatial knowledge often seems to be restricted to very limited spatial scales, while in secondary schools the approach to European and global spaces rarely succeeds in escaping from an impersonal and aseptic list of nomenclatures, definitions and geographical facts without creating empathy with the studied topics. In any case, the sea remains something which is distant and remote.

As a matter of fact, in primary schools, the result of such a distance is also due to the scarcity of contents, banality and the rhetoric used by school books to represent the sea. Drawing on the preliminary findings from the previously cited school text analysis, it emerged that in most cases chapters and paragraphs dealing with sea issues are limited to a superficial description of the coastal landscape in which nomenclatures related to the type and the cost of accidents are always present while, economic, cultural, emotional, and recreational analysis is always missing. According to 10 key informants working in schools, it seems that the sea, and particularly the high seas, is likely to remain an unknown space, something which is indistinct, intangible, abstract.

Outside Italian schools, other bodies are working for the interaction between citizens and the marine environment. These are environmental, cultural and sports associations, which in addition to promoting the practice of different sea sports, spread maritime culture and respect for the marine world. Institutions like the Coast Guard for example are also supporting institutional educational activities in colla-boration with educational institutions. Therefore, an extensive information campaign and updated education agenda is urgently required. To be effective, this should include the adoption of a geographical point of view (Tilbury, 1997), which strongly emphasizes a physical, economic, political, perceptual and cultural relationship between humans and space. It should be also implemented by educational institutions in collaboration with international organizations, NGOs, museums, aquariums, environmental associations, sports clubs and no less important world sailing personalities.

To conclude, we also suggest that a deeper and lasting relationship should to be created from an early age to take care of the sea environment. Basically, it is about transforming the relationship with a space into the relationship with a place (Tuan, 1978).

6. Conclusive reflections: the need for an OC research agenda

In our opinion, it is necessary to promote the idea of ocean citizenship to enhance the will to preserve the largest environment of the Earth. The sea is undeniably the unique heritage that is wholly shared among the world's inhabitants, and as such it the unique space where the idea of human community finds its own territory to experience commitment in overcoming national and more general socio-spatial individualisms (Raynaud, 1984). As outlined in the numerous cited studies, the spread of this idea must be promoted through education and put into effective action by appointed formal and informal education bodies and actors that often seem to ignore reciprocal activities. There is considerable support in prior literature debates to recommend further investigations along with a sounder research agenda. This may ideally comprise a

wider range of sea related topics focused on schools, environmental associations, sport clubs, national entities, armed forces and nautical world characters with the purpose of mapping and registering whoever is working to develop the idea of ocean citizenship while possibly suggesting shared common practices. Furthermore, the sea image and marine culture values should not be forgotten as narrated and projected by literature, cinema, arts, and press because our ideas and relations of space derive from a sum of constructive discourses of geographical sense, promoting or restricting a cognitive, affective and cultural appropriation of a portion of – or the entire – planet even by those who have not yet had the opportunity to look over a limited horizon. After all, Halford J. Mackinder argued that "geography at its best is a matter of imagination" (Schmidt di Friedberg, 2010, p. 256) or, even better, of utopian imagination.

Acknowledgements

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