Bridging Continents in Teaching Environmental History: Rio de Janeiro and Vienna

Fazendo pontes entre continentes no ensino de História Ambiental: Rio de Janeiro e Viena

Rogério Ribeiro de Oliveira
Departamento de Geografia, PUC-Rio, Rio de Janeiro
Rua Marquês S. Vicente, 225. 22 453-900. Rio de Janeiro, RJ, Brasil
bolsista CNPq
rro@puc-rio.br

Martin Schmid
Center for Environmental History, Social Ecology Vienna, Alpen-Adria-University
Schottenfeldgasse 29/6, A-1070 Vienna, Austria
martin.schmid@carsoncenter.lmu.de

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Abstract
This paper presents and critically discusses an experiment in environmental history didactics. For the first time - as far as we know - an intercontinental course in environmental history was designed and offered, simultaneously in Vienna (Austria) and Rio de Janeiro (Brazil). From an environmental history perspective a city is a socio-natural site, its present shape is the result of a co-evolutionary process of nature and society. This paper is a teacher's reflection about the potentials and limitations of e-learning and blended learning (the combination of face-to-face and virtual communication) based teaching of urban environmental history in an intercontinental, multilingual and intercultural setting.

Keywords
environmental history teaching, urban environmental history, landscape

Resumo
Este artigo apresenta uma experiência em História Ambiental. Pela primeira vez – ao tanto quanto se saiba - um curso de História Ambiental de pós-graduação intercontinental é realizado, simultaneamente em Viena (Áustria) e no Rio de Janeiro (Brasil). A partir da perspectiva da História Ambiental, uma cidade é um sitio socionatural, cuja forma atual é o resultado coevolucionário de processos que envolvem a natureza e a sociedade. Este artigo é uma reflexão sobre as potencialidades e limitações do aprendizado à distância e o aprendizado misto (combinação do ensino presencial com a comunicação virtual) de um ensino baseado em história ambiental urbana em um cenário intercontinental, multilíngüe e intercultural.

Palavras-chave
ensino de história ambiental, história ambiental urbana, paisagem

Introduction

Comparisons between distinct realities in many fields of the social and natural sciences are both difficult and controversial - difficult because they often involve situations and places with very distinct histories, environments and cultures - and controversial because the processes involved, whether physical, biological or social, demonstrate singularities that make comparisons immediately vulnerable to criticism for attempting to simplify very complex realities. In spite of these difficulties, attempts have been made to avoid merely descriptive analyses and focus on widening our analytical horizons. A view point that is clear and distinct is similar to a mirror - it reflects the image of the observer himself.

The study of Environmental History has grown significantly in recent years, and can be defined as an open and non-reductionist investigation of the interactions between social and natural systems over time[1] or, as John McNeill has put it from a historian's perspective, as the history of the mutual relations between humankind and the rest of nature.[2] Environmental History is no longer just a branch of history; it has been incorporated into many other disciplines - especially in light of its interdisciplinary orientation. Geography, Ecology, Anthropology and Sociology are just a few of the disciplines that have incorporated the vision that Nature and Society form a co-evolving system. Long ago historians began to lose some of their certainty that the past has been controlled or represented by just a few great men occupying central roles of national power. Scholars have begun to dig more deeply into long undisturbed layers containing the lives and thoughts of common men and are now attempting to re-think history "from the bottom up".[3]

On the other hand, the historian William Cronon[4] understood that nature itself is a highly complex human construction in the sense that the concept of nature contains an extraordinary amount of human history. Environmental History attempts to take this complexity into account, basically proposing to combine knowledge and perspectives from both the social and natural sciences to better understand the present as the result of the co-evolution of nature and society. Many rounds of discussions have contributed to the arrival of Environmental History to the center of contemporary thought about the environment, and this discipline is founded on the following aspects:

a) Changes in anthropogenic actions over time: Landscape transformations generally go through cycles over time according to the evolving relationships of societies with their environments, generating distinct ecological outcomes.

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[1] PÁDUA, J.A. 'As bases teóricas da história ambiental'. *Estudos Avançados*, 2010, XXIV (68), p.81-101.
[2] McNEILL, J. R. 'Observations on the Nature and Culture of Environmental History'. *History and Theory*, XLII, 2003, p. 5-43.
[3] WORSTER, D. 'Para fazer história ambiental'. *Estudos Históricos*, IV (8), 1991, p. 198-215.
[4] CRONON, W. 'Modes of Prophecy and Production: Placing Nature in History'. *The Journal of American History*, LXXVI (4), 1990, p. 1122-1131.

b) The omnipresence of anthropogenic actions: ecosystems around us and almost all over the world have been marked by human presence in many ways and to varying degrees - from the hunting forays of Paleo-Indians to the current outflow of pollution.

c) The concept of scale: The marks of anthropogenic actions can be seen at local and regional scales, with Global Climate Change even on a global scale, affecting communities and ecosystems. To some extent it can be argued, what can be seen in one place can be seen in all, and vice-versa.

d) Perceptions of the environment: At a time of growing degradation of ecosystems and biodiversity, it is important to look back at the viewpoints of past generations concerning the natural environment - their ethical and environmental values, their beliefs, their changing relationship with nature, their concerns about sustaining future generation, etc.

Are there general premises and hypotheses that can embrace the entire field of landscape transformational processes? While some authors (such as Carole Crumley[5]) have argued that Environmental History should, by definition, include an examination of the human history of a given system, Rhemtulla[6] and Mladenoff defended a wider perspective that includes any and all investigations that analyze changes in ecosystems and interactions between patterns and processes over time - the comprehensive history of an ecosystem. According to Girel[7], the need to preserve a "natural" state then became evident in the northern hemisphere countries where human activities have significantly altered the spatial organization of the ecosystems. So, what should be considered as "natural" or “human”?

Among the numerous authors that have sought to explain the processes involved in the co-evolution of society and nature, we can cite Bürgi *et al.*[8] who proposed three hypotheses: a) landscape changes remain closely associated with the geomorphological characteristics of the land; b) landscape changes are the expression of socioeconomic demands for specific resources; c) technological transformations give rise to landscape changes.

Balée[9] also advanced into the difficult territory of generalizations about landscape transformational processes by proposing that: a) Much, if not all, of the non-human biosphere has been affected by human activity; b) Human activities do not necessarily lead to degradation of the non-human biosphere and the extinction of species, nor does it necessarily create a more habitable biosphere for

[5] CRUMLEY C.L. ‘Historical ecology: a multidimensional ecological orientation’. In: CRUMLEY C.L. (Ed.). *Historical ecology: cultural knowledge and changing landscapes*. Santa Fe: School of American Research Press, 1994, p. 56-77.
[6] RHEMTULLA, J.M.; MLADENOFF, D.J. & CALYTON, M.K. ‘Regional land-cover conversion in the U.S. upper Midwest: magnitude of change and limited recovery (1850–1935–1993)’. *Landscape Ecology*, XXII, 2007, p. 57–75
[7] GIREL J. ‘Quand le passé éclaire le présent: écologie et histoire du paysage’. *Geocarrefour*, LXXXI (4), 2007, p. 249-264.
[8] BÜRGI, M., STRAU, A., GIMMI, U. & SALZMANN, D. ‘The recent landscape history of Limpach valley, Switzerland: considering three empirical hypotheses on driving forces of landscape change’. *Landscape Ecology*, XXV, 2010, p.287–297.
[9] BALÉE, W.E. ‘Historical Ecology: premises and postulates’. In: BALÉE, W.E., (Org.). *Advances in Historical Ecology*. New York: Columbia University Press, 1998, p. 13-29.

humans and other life forms, or increase their abundance and species diversity; c) Different kinds of sociopolitical and economic systems tend to promote qualitatively different effects on the biosphere; and d) Human communities and cultures together with the landscape and regions with which they interact over time can best be understood as interconnected phenomena. Both the hypotheses of Bürgi and Balée were considered adequate for the present work and have aided in our comparisons of different regions.

This attempt by Environmental History to compare regions, natural resources, economies and cultures is fundamental to our understanding the serious risks presented to ecosystems (and even the entire planet)[10]. The difficulties encountered in comparing two regions, countries or different historical-ecological processes increase with increasing heterogeneity of the cultures considered – and our greatest challenge is to find bridges linking very different landscapes and human processes. A common conceptual ground, a basic similar understanding of what environmental history is about, is therefore essential.

It was with these objectives in mind that two groups dedicated to studying the Environmental Histories of Vienna (Austria) and Rio of Janeiro (Brazil) decided to break through the barriers presented by their counties, cities, institutions and departments to propose a new course entitled "Bridging Continents: Comparing urban environmental histories of Rio of Janeiro and Vienna" - a graduate course sponsored by the Institute for Social Ecology (Alpen Adria University, Vienna) and the Department of Geography (Pontifícia Universidade Católica do Rio de Janeiro) between March and July, 2010. This course in urban environmental history represented a fruitful activity in international environmental history.

From the perspective of environmental history, a city can be approached a socio-natural site whose present shape is the result of co-evolutionary processes of both nature and society.[11] The classes in Austria focused on the environmental history of Vienna and different selected urban spaces (such as urban forests, settlements, and bodies of water) using an environmental/ history approach to study and identify the specific social, cultural and ecological qualities of those spaces. The Viennese class closely cooperated through e-learning tools with a group of students at the Geography Department of the PUC-Rio working on similar topics in the area of Rio of Janeiro. Both groups engaged in continual exchanges during a full semester and concluded with presentations of their results and discussions between Viennese students and their Brazilian colleagues.

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[10] PÁDUA, J. A. *Um sopro de destruição: pensamento político e crítica ambiental no Brasil escravista, 1786-1888*. Rio de Janeiro: Jorge Zahar, 2002, 318 p.

[11] WINIWARTER, V.; SCHMID, M.; HOHENSINNER, S.; HAIDVOGL, G., 'The Environmental History of the Danube River Basin as an Issue of Long-Term Socio-Ecological Research'. In: SINGH, S.J.; HABERL, H.; CHERTOW, M.; SCHMID, M.; MIRTL, M. (Eds.). *Long-Term Socio-Ecological Research. Studies in society - nature interactions across spatial and temporal scales*. Human - Environment Interactions, series edited by MORAN, E., Volume 1 (Springer Netherlands) (forthcoming).

The two cities chosen for comparison are very different in many respects. With about 6 million inhabitants (12 million in the greater urban area) Rio of Janeiro is one of a number of booming mega-cities in Latin America. Rio de Janeiro is world famous for beaches and Carnival, but is also well known for its extensive and numerous slums ("favelas"). But what do we know (and what can we know) about the environmental histories of both well-known as well as less-visited places in Rio? Vienna, Austria, was the heart of an European empire until the dawn of the 20th century. With 1.7 million inhabitants, Vienna is much smaller than Rio - and the two cities have taken very different socio-ecological paths during the last 200 years. There is no doubt about major differences between the two cities in terms of their past and present situations, but are there similarities in their environmental histories? Were there exchanges between them during the colonial period?

Conceptual background and methodology of the course

According to Winiwarter,[12] in order to teach Environmental History one must not be bound to a fixed doctrine, but rather seek an open and common conceptual base. The proposal to compare two continents with very distinct socio-ecological realities was based on a methodology that stressed certain key-concepts that could guide and focus the proposed analyses.

The first concept was that of socio-ecological systems as proposed by Haberl et al.[13]. This approach emphasizes three major research themes: (1) Socioecological metabolism studies the physical exchange of material and energy between societies and their natural environment;[14] this concept has been operationalized in sets of environmental indicators like Material and Energy Flow Analysis (MEFA) and it allows for systematic quantitative assessments of the pressures societies exert on ecosystems on regional, national or global scales. (2) Land use and landscapes is concerned with how societal activities as well as biogeophysical dynamics have shaped landscapes over time. (3) Finally, governance and decision making link research to practice by analyzing the way how societal activities, which affect the environment, are negotiated and implemented. Additionally, Fischer-Kowalski and Weisz[15] suggested viewing socio-ecological systems as hybrids between biophysical and socio-cultural dimensions. Comparisons made during the course by the two groups of students from the two different countries concerning landscape elements (a forest, a river, or a village) used the multiple interactions that make up a socio-ecological system as a guiding theme for their analyses.

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[12] WINIWARTER, V. 'The Challenges of Teaching Environmental History'. In: SZABO, P. Hedl, R. (Eds.), *Human Nature: Studies in Historical Ecology and Environmental History*. Brno: Institute of Botany of the ASCR, 2008, p. 8-13.
[13] HABERL, H. et al. 'From LTER to LTSER: conceptualizing the socioeconomic dimension of long-term socioecological research'. *Ecology and Society*, I (2), 2006, p. 13-26.
[14] FISCHER-KOWALSKI, M.; WEISZ. H. 'Society as a hybrid between material and symbolic realms: toward a theoretical framework of society-nature interrelation'. *Advances in Human Ecology* VIII, 1999, p. 215-251.
[15] FISCHER-KOWALSKI, M.; WEISZ. H., *Society as a hybrid*…

A second key-concept used in comparing the two study areas was the both simple and complex idea of landscape. This is a fundamental concept in Environmental History that can integrate human actions and "nature" in a specific space and place. Berque[16] states that landscape studies should be a combination of "natural" and "social". Nash[17] made an important contribution to the study of Environmental History by recommending that landscapes be interpreted as if they were historical documents - for both are simultaneously physical realities and social constructions. To the traditional Marxist dichotomy between "nature and second nature"[18] we might also add "second land", "second forest", "second climate" and so forth, to acknowledge the processes of landscape transformation through human labor.

As such, the sense of a landscape is not only a current interpretation but also a testament to past events, the presumed result of dynamic interactions – and we are therefore dealing with a conjugation of scales, structures and processes. Given their dynamic characters and intimate relationships with their use-history, landscapes always exist in a permanent process of transformation. The search for and the identification of the processes involved in landscape transformation constituted an important analytical path for developing a course designed to bridge continents.

The third key-concept used during the course was that of a territory. The concept of a territory embraces multiple dimensions (both symbolic and jurisdictional) and designates the geographic space in which a given human group is encountered and in which its members engage in their struggle for shelter and survival. As such, a territory can be understood as a true physical space (with its constituent natural attributes) that is appropriated (or occupied) by a social group - the space in which a population has its cultural roots and develops its cultural identity. The history of human activity within an ecosystem can be viewed from many different angles as well as from different time and spatial scales, so that studies of these areas must take into account the fact that essentially all ecosystems are spaces appropriated by the cultures that utilize them (or utilized them at earlier times). A paleo-territory constitutes the spatialization of the influences of past ecosystem usage by a specific population during a certain socio-ecological complex.[19] The successive uses of these lands leave distinct marks that make them recognizable as paleo-territories, and they can often overlap in a given geographical space.

[16] BERQUE A. *Écoumène. Introduction à l'étude des milieux humains*, Paris: Ed. Belin, 2000, p. 256-257.
[17] NASH, R. 'Environmental history', In: BASS, H.J. (ed.) *The state of American history.* Chicago: Quadrangle Press, 1970, p. 249-260.
[18] SANTOS, M. *Metamorfoses do espaço habitado*. São Paulo: Hucitec, 1988, 124 p.
[19] OLIVEIRA, R. R. 'Environmental History, Traditional Populations,and Paleo-territoires in the Brazilian Atlantic Coastal Forest'. *Global Environment*, 2008, I, p. 176-191.

Aims and didactic techniques

The principle aim of this course was to increase our students' knowledge of the environmental histories of urban sites, in particular those of Rio of Janeiro and Vienna. Groups of three to four students designed and worked on small projects while learning how to communicate their findings to an audience from a distant and different culture. We all took away lessons about the potential (as well as the limitations) of e-learning and "blended learning" (the combination of face-to-face and virtual communication) in international, multilingual and intercultural communications.

The course emphasized working in small groups and on exercises, seminars, and debates instead of traditional lecture series. Groups were formed in both countries to work on the following themes: forests, rivers and small human settlements or urban neighborhoods. In the first phase work concentrated on internal discussions, and was followed by debates over the internet with their out-of-country mirror-group.

The following field work phase was initiated by the study groups after the third class and focused on the study themes (forests, rivers and small human settlements) in both cities on both sides of the Atlantic. The three selected sites in Rio were all in the Camorim River hydrographic basin, located in the Maciço da Pedra Branca, in the western part of the city of Rio of Janeiro; in Vienna, those thematic sites were encountered dispersed within the urban area of the city; the River Vienna (Wienfluss), the Lainzer Tiergarten (a wildlife preserve) and the Jew's Square (Judenplatz in Vienna's first district, the old town) were chosen.

The course used Moodle[20] a free source e-learning software platform to up-load all of the didactic material (exercises, reading material, group work, photographs, films, suggestions of related thematic sites, classes, seminars), and lectures, presentations and discussions were recorded using Lecturnity[21] that can, the necessary hardware given, record presentations in sound and vision and incorporate slides used during a presentation. Skype[22] (the free video and voice calling program) was used for direct communication between Vienna and Rio de Janeiro

English was used in all intercontinental communications, although in general there was not very much direct country to country communication. The technique most used involved activities carried out by groups in both countries. At the very beginning of the course, for example, we gave to the Brazil team a physical map of the region around Vienna, without any other indications about the land use there or the time period; a similar map of the tropical region was given to the Viennese students at the same time. The

[20] Modular Object-Oriented Dynamic Learning Environment (http://moodle.org)
[21] http://www.lecturnity.com
[22] http://www.skype.com

students were then asked to suggest a form of historical occupation of the area taking into consideration the following aspects: a) the energy conversion system; b) the use of natural resources; c) nutrient cycling and energy use; d) cultural and environmental relationships including opportunities and threats from natural features of the landscape. The conclusions of each group were recorded on flipcharts or directly into a Power Point presentation that was later shown to the mirror-group in the other country, and their commentaries were then fed back to the other group. As such, even though there was no direct communication between the two countries there were always feed-back exchanges between them in relation to the activities being developed. The same procedure was adopted for the theoretical classes. At the very first meeting, the two instructors outlined the principal objectives and concepts used in Environmental History and gave general overviews of the environmental histories of their cities. These introductory lectures were recorded and shown to the mirror groups a week later and commentaries were exchanged over the internet.

Results and perspectives

The course was very positively evaluated by the participants. The experience of sharing the same course with two groups with quite different backgrounds stimulated the students' interest for the entire duration of the course. At same time, the fact that the work group had identical themes in both countries contributed not only to their general interest in the course, but also created additional motivation to deliver high quality presentations to their mirror group. This linked the students to the themes of their research and encouraged completion of the projects.

The groups were composed by students from diverse backgrounds (among them architects, geographers, historians, biologists, students of literature, military personnel). Additionally, the participants had different cultural backgrounds and interests, and had very distinct experiences in Environmental History. This heterogeneity of interests and study objectives presented many challenges, and the first difficulty to appear came during attempts to explain and describe the forest, river, and settlements in their home country to the mirror-groups. How can the complex relationships between such different social and ecological systems best be approached? How can connections between society and nature, America and Europe, and temperate and tropical climates be found? These were perhaps the greatest challenges during the course.

The common concepts described earlier, such as landscape and territory, helped to turn those challenges into assets the students' groups received a simple but by no means trivial task: Explain to your colleagues in Brazil/Austria what a forest/river/settlement is in your city by telling them the environmental history of such a peculiar place in your city! A common conceptual framework helped to compare very

different sites, to become aware of differences but also similarities, e.g. to interpret these sites and their change over time, as socio-ecological systems.

The two forests studied during the course were urban forests. Lainzer Tiergarten is located in the southwestern corner of Vienna, similar to the Camorim Forest situated west of the center of Rio de Janeiro. Historically, Lainzer Tiergarten has been more intensively exploited and changed by humans and introduced game animals[23] than the Camorim Forest. But in addition to the space needed to cultivate sugarcane in Rio de Janeiro, the land there was also used by the slaves for subsistence farming, resulting in additional forest clearing. These farm plots played an important role in reducing friction between owners and their slaves, as they represented a significant reduction in maintenance costs for the slave owners and an opportunity for the slaves to gain at least a small degree of economic independence.

Both forests were used for extracting energetic resources in the past, while they currently serve as biodiversity reserves and areas of recreation and (eco)tourism. In the case of Brazil, the students presented the forest as a source of natural resources and energy (fruits, roots and palm hearts; medicinal plants; game animals; firewood and wood) and as a source of nutrients for agriculture (when the forest is burned, ashes fertilize the soil). Each of these items was analyzed in terms of their use during the various socio-economic periods: indigenous agriculture, sugar cane plantations and charcoal production in the 19th and 20th centuries. Most of the present day forests in Rio of Janeiro were also paleo-territories of charcoal producers and small-plot farmers during the 19th and 20th centuries. It was pointed out by the study groups that these activities did not impede the natural regeneration of the forest. This was likewise observed in Vienna's Lainzer Tiergarten, although the students did point out that there were marked differences in terms of forest use in recent times of war and peace. Both groups concluded that, besides the huge difference in terms of biotic composition, the concept of biodiversity is not enough to express the values and systems complexities.

The seminars that examined the rivers (the Wienfluss and Camorim River) showed very clearly the complex relationships that exist between human societies and their ecosystems. The extensions of these two rivers are different in each country (Vienna River, 34 km; Camorim River, 16 km), although their average mean discharge are comparable with significant differences in the (seasonal) flood regime. As also occurred in the case of the forests, human occupation of the River Vienna's drainage is much older than that of Camorim. Another difference between the two river systems is the fact that while the Vienna River was subjected to radical alterations of its natural course during the period between 1750 and 2000,

[23] PROSSINAGG, H. Ummauerter Wald: Das Naturschutzgebiet Lainzer Tiergarten. In: BRUNNER K.; Schneider, P. (Eds.), *Umwelt Stadt: Geschichte des Natur- und Lebensraumes Wien.* Wien: Böhlau, 2005, p. 340-345.

in particular in the late 19th century[24], the same was not true for the Camorim River. For the Austrian case, the students emphasized the transition from a socio-ecological agrarian regime to a fossil fuel energy regime as a major driver for the complete urbanization of that waterbody in the course of industrialization. In the case of the Camorim River, however, and due to the fact that it is far from the center of that metropolis, this transition has been much slower, and the water basin was used for a very long time only for agricultural purposes. The two groups concerned themselves with evaluating the contributions of these rivers to changes in the social metabolism in their respective water basins during the last two centuries. During the 18th and 19th centuries the two rivers had similar roles in supplying water and mechanical energy to mills (wheat and sugar mills, respectively to Vienna and Rio de Janeiro). Industrialization later occupied the banks of the Vienna River, but was absent in the Camorim River basin. With the growth of urbanization near the end of the 19th century the water quality of the Vienna River decreased significantly due to the presence of sewage, while the Camorim River was much less affected by this type of pollution. The two groups concluded that the differences in urbanization intensity at the two sites were the factors that most heavily weighed on the current differences that exist between these two socio-ecological systems.

The theme concerning settlements clearly demonstrated the greatest differences between the study localities (Jews Square, in the center of Vienna, and the São Gonçalo do Amarante Chapel, in the Camorim neighborhood of Rio of Janeiro). These sites (a city square and a church) have very different social, political and cultural histories and very distinct social functions today. The church was constructed in 1637 as a chapel within a large sugar cane plantation and could easily be viewed as a status symbol for the wealthy landowner. But it also must be remembered that the colonists/landowners were outnumbered by their slaves, a situation requiring various methods of control - including religious. The goal of this seminar was to understand changes in traditional communities and landscapes by examining the history of the São Gonçalo do Amarante chapel. As in the past, the chapel exists as a center-piece of the neighborhood for both parishioners and non-parishioners - a social-center and source of community pride. The relationship with the land near the chapel changed from exploitation and urbanization to conservation, and both the chapel and the presence of the Pedra Branca State Park have contributed to this shift.

Jews Square has a much longer history than the chapel in Rio of Janeiro. Archaeological excavations revealed a long history of human occupation that began around 100 AD with the first wooden

[24] BÉKÉSI, S. 'Die Metamorphosen des Wienflusses: Zur Geschichte der Vergesellschaftung von Natur am Beispiel eines städtischen Gewässers'. *Studien zur Wiener Geschichte*, LXVI, 2010, p. 37 – 61.

phase of a Roman military camp.[25] It is important to note that archaeologist found no durable archaeological structures like buildings or streets from the time between the end of Roman presence (around 400) and the high medieval resettlement of the area (around 1100 AD). Students took that archaeological evidence as a hint for the fact that long-term urban environmental histories are not always linear histories of increasing prosperity and growth, but also full of fractions and periods of decline Although the construction and orientation of the roman camp influenced the spatial orientation of the neighborhood for the centuries and millennia to come, an illustrative example for the long term legacies of past material urban arrangements. . In the Middle Ages, Vienna was home to a thriving Jewish community, one of the most important in Europe, and the area with the synagogue was the center of that community. In 1420-21 during a violent pogrom Viennese Jews were expelled or murdered, their synagogue was destroyed. In their concluding presentation Viennese students discussed questions of politics and urban supply as reflected in the local history of that square. They took the example of a late 19th century warehouse for the rapidly changing material and economic relationships of Vienna as the capital of the vanishing Habsburg Empire. As inhabitants of Vienna they made clear that for them Jews Square is currently a "dead" square, quite unknown and off the beaten touristic track through the city, although its history is kept alive by nearby museums and by the exposition of its ruins. In their general conclusions students referred to a 1980s and 1990s debate among environmental historians about the city's role and importance in environmental (agroecological) history.[26] They used the notional opposition of nature vs. environment to clearly claim for a view consequently integrating nature and society in the study also of urban sites.

The greatest potential of such a course is the requirement that students must approach familiar subjects from the viewpoint of an outsider. The groups had to develop presentations that included detailed descriptions of areas they may have otherwise over-looked in order to create a complete and understandable picture for the mirror group. In addition, despite best efforts, the ability to critique and ask follow-up questions identified areas of cultural differentiation between the two regions. In other words, the exercise allowed the individuals to see themselves better by looking through another's eyes.

Limitations included the ever-present possibility of a technological delay as a computer or program may crash or fail to load. Prior planning allowed the use of a backup computer the one time a file failed to load on the first try. Otherwise, the technological resources were more reliable than expected, although there is a wide gap between "getting by" and elegance, especially in the realm of

[25] HELGERT, H.; SCHMID, M.A. 'Die Archäologie des Judenplatzes. Vom römischen Lager bis zur Zerstörung der mittelalterlichen Synagoge'. In: *Katalog Museum zum mittelalterlichen Judentum Judenplatz, Wien*, 2000, p. 16-49.
[26] ISENBERG, A. C. 'Introduction: New Directions in Urban Environmental History'. In: ISENBERG, A. C. (Ed.), *The Nature of Cities (Studies in Comparative History)*. Rochester: Universtity of Rochester Press, 2006, p. xi-xix.

sound quality on the presentations. This course used a manual labor intensive technique of using a separate recorder and then synchronizing the sound to the video. The purchase of a studio quality video recorder with the capability to add microphones was beyond the scope of this course's budget. A larger budget would have made the behind the scenes work more convenient and time-efficient, but would not have drastically improved the end-products or the quality of the process of common learning.

The limitations and the potential benefits of this type of course are both quite ample. Its limitations are principally due to a lack of direct contact between the students and their over-seas counterparts. A decision was made to reduce real-time classes via Skype in order to stimulate intra-group debates, while at the same time avoiding any inconvenience to those students who were less fluent in English. In the same way, field work can be a problem as the weather may often severely interfere with planned activities. But one very relevant point in terms of the functioning of the course was the large differences in the students' back grounds in Environmental History. While some students were well versed in this academic field, others had their first contact with environmental history during the course itself. Instructors can at least partly turn that challenge into an asset by organizing common learn spaces in which students with different experiences can learn from each other.

The formulae used for the course, starting from its conceptual base through its technical operation, worked very satisfactorily in achieving our objectives. The thematic groups that met among themselves and with their colleagues from the other country proved to be a valuable tool for working and interacting. The association of theory with practical lessons while examining interesting places was very stimulating to the students, especially the presentations of their studies to colleagues in another country.

One important characteristic of this type of course is the possibility of adapting it to other socio-ecological realities, as it can be repeated with different pair networks, such as between two cities in the same country, or between different institutions, at almost negligible cost. The "mirror-effect" that the course tends to provoke among its participants constitutes a springboard for deeper involvement in the intriguing and challenging questions of Environmental History.

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