
Plants and culture: a neglected basic partnership for interculturality

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Abstract

Piante e Cultura: un trascurato binomio di base per l'Interculturalità. Le piante possiedono il ruolo innato di vettori di interculturalità. Questo lavoro intende proporre la botanica osservata in questa prospettiva, nel tentativo di sottolineare aspetti della relazione uomo-piante unificanti e caratterizzanti la nostra specie. A tale scopo, il testo parte dalla considerazione che il binomio 'piante e cultura' accompagna da sempre la storia umana. Dalla raccolta alla coltivazione, le diverse forme di sfruttamento delle specie vegetali hanno causato nel tempo cambiamenti nella flora e nella vegetazione che sono sfociati in trasformazioni evidenti del paesaggio naturale in paesaggio culturale. Allo stesso tempo anche il comportamento umano si è modificato e nuove strategie di sussistenza hanno permesso di adattarsi a un ambiente in continua evoluzione.

Gran parte della conoscenza che per generazioni ha permesso di 'sapere come usare la foresta senza distruggerla' sta oggi andando perduta. Per questo motivo, la Organizzazione Mondiale per la Salute (WHO-World Health Organisation) promuove da anni, e sempre più insistentemente, la valorizzazione della medicina tradizionale, basata su una conoscenza profonda ed empirica delle piante medicinali e magiche. Anche se la conoscenza empirica richiede verifiche e presenta indubbe criticità, la medicina tradizionale assume, secondo la WHO, un ruolo di strumento fondamentale per la salute fisica e mentale dei popoli, oltre che per la salvaguardia delle identità culturali dei paesi in via di sviluppo. Il mondo occidentale, e l'Europa in particolare, soffre tragicamente la perdita di conoscenze botaniche che sono ora spesso relegate a nicchie geografiche e a persone anziane, e tendono a sparire assieme a loro. Gli studi etnobotanici e quelli archeobotanici aiutano a censire e riscoprire questo patrimonio, diventando stimolo per conservarlo o per la ricerca di nuove strade di trasmissione culturale. Alcune mostre, appositamente studiate per creare un ponte conoscitivo tra scienza e divulgazione, vanno in questa direzione. Il lavoro propone alcuni esempi tratti dalla mostra trans-europea PaCE svolta nell'ambito del progetto europeo su 'Piante e cultura: semi del patrimonio culturale europeo' (consultabile al sito web: <http://www.plants-culture.unimore.it/exhibition.htm>).

Plants have always had fundamental value for human life, but the customary importance now given to plants *per se* seems to be out of the *Zeitgeist* of this century, while molecular biology is largely more fashionable than classic botany among life sciences (Dixon 2005; National Research Council 1992; Olmstead 2006).

Plant exploitation, depending on different subsistence strategies and territories, has always been a fundamental aspect of human cultures (Neumann *et al.* 2003; Zohary and Hopf 2000). From gathering to cultivation, the different forms of plant exploitation have forced wild landscape to develop into cultural landscape (Birks *et al.* 1988; Sadori and Mercuri in press; Zeist van *et al.* 1991), and human behaviour to adapt to changing environments (Diamond 2002). In recent times, the decline of the agriculture-based culture in many countries has caused the separation of city and countryside, and modern humans are suffering a gradual but continuous loss of perception of the seasonal rhythms, which our ancestors knew were marked by plant life cycles. One major effect of the botanical knowledge crisis is that most people are no longer aware of the relevance of plants in their lives (Appendix 1). The disappearance of

indigenous plant knowledge among the native people of all continents, i.e. *the knowledge of how to use the forest without destroying it* (Plotkin 1994), is considered a huge botanical tragedy that has been ongoing over recent decades, resulting in the loss of long-established history of human wisdom.

Nevertheless, even today, plants support both primary needs (*sensu* Maslow 1954), such as food, remedies, clothing, tools, furniture and homes, and social and transcendental needs.

The United States Botanic Garden (USBG, in Washington, D.C.), run by the Congress of the United States, has recently hosted a new permanent exhibition '*Plants in Culture*' whose banners proclaim three "*big ideas*": *plants are the seeds of our inspiration; plants are central to our languages, cultures, customs, and cuisines; and plants express our sense of who we are* (http://www.exhibitfiles.org/plants__culture).

The 'big ideas' refer to human beings without distinction of gender and continent.

Miller Coyle opens her book on Forensic Botany with these words: *«Plants are ubiquitous in nature, essential for all human and animal existence. They are critical to*

the earth's atmosphere and to other forms of life, and serve a function as intermediaries by converting solar energy into complex molecules. While some plants provide a source of food, others provide fibre, medicine, and aesthetic pleasure...» (Miller Coyle 2005: 1). It is not by chance that this is the introduction to a book on forensics. Plant science, as part of biology, clearly entered the realm of criminal sciences in the early 19th century, when science itself was beginning to be recognised as an invaluable tool for case solving (Baldini 1998). Both plants and crimes are part of humans' social life. What is more, it is through our interest in criminal events that we humans discover the perils of the world in which we live. In the same manner, our ancestors would carefully observe their world, scrutinising every plant, every animal, and every event. Probably, the more important something was for survival, the more attention they gave it. Humans learn by observation, imitation and social transmission (Hass 1970; Wyrwicka 1996; Tomasello 2005). Therefore, they must have also imitated animals when selecting food plants, thus knowing new plants, or avoiding toxic or poisonous plants (Mercuri 1999; Röska-Hardy. Neumann-Held 2009). The legend about how coffee became a drink tells that the shepherd Kaldi noticed the strange excited behaviour of his goats after they had eaten fruits and leaves of a certain bush, and decided to eat that plant. He felt full of energy, and therefore carried fruits and branches to a monastery close to his pasture land. The abbot cooked the plant but the result was such a bitter drink that he threw the pot and its concoction into the fire: after that, seeds produced a pleasant aroma and the abbot decided to make a drink based on the roasted seeds (Davids 2001).

Humans learned empirically by trial and error. They paid attention to the characteristics of the different plants such as, for example, their bitter taste (Johns 1990). Just as people learnt to exploit plants for food, so they learnt to use plants as medicine (UNESCO 1994). In the beginning, the boundary between food and medicine/drug remained blurred (Totelin 2004), but then they realised that plant chemicals had effects and that the effects could differ depending on the dose of plant ingested.

The history of modern medicine has its roots in traditional medicine, which is largely plant-based. Traditional Medicine is defined by the World Health Organisation (WHO 1978) as *«the sum total of knowledge or practices whether explicable or inexplicable, used in diagnosing, preventing or eliminating a physical, mental or social disease which may rely exclusively on past experience or observations handed down from generation to generation, verbally or in writing. It also comprises therapeutic practices that have been in existence often for hundreds of years before the development of modern scientific medicine and are still in use today without any documented evidence of adverse effects»*. It is normally stated that

modern Western medicine is based on the Hippocratic Collection, consisting of about 60 texts written by several authors and preserved under the name of Hippocrates (ca. 460 BC-ca. 370 BC). This basic written source describes the effects of about two hundred and thirty plants, including thyme, saffron, marjoram, cumin, peppermint and opium poppy. The Hippocratic theory emphasises dietetics, relying on diet as a therapy, a principle never found before then (Totelin 2004). The boundary between dietetics and pharmacology was indistinct, and dietetics, pharmacology and other ways of treating diseases were part of an integrated system. What distinguished a 'food' from a 'drug' in ancient Greece? The author of the Hippocratic treatise 'Places in Man' writes that: *«All things that cause change in the present state [of the patient] are drugs, and all [substances] that are rather strong cause change. It is possible, if you want, to bring about change by means of a drug, or, if you do not want [to use a drug], by means of foods»*. For example, it seems that silphium was primarily exported from Libya as a spice and that the plant's medicinal uses stemmed from its uses in cooking. With time, the definition of 'drug' as opposed to 'food' became clearer. The Aristotelian Problems (a 3rd century BC collection of texts attributed to Aristotle) state that foods are 'concocted' and assimilated by the body, whereas drugs penetrate into the vessels and cause disturbances due to an excess of heat or cold. In any case, the food/drug boundary remained blurred throughout antiquity, with plants like myrrh, pomegranate, frankincense, cinnamon and also silphium finding a place in both dietetic treatises and texts dedicated to drugs (Totelin 2004).

Traditional medicine was once challenged because believed to be primitive compared to the orthodox medicine, and especially dating back to colonial times (Elujoba *et al.* 2005). However, an increasing reliance on the use of medicinal plants in industrialized societies has been traced to the extraction and development of several drugs and chemotherapeutics from traditionally-used rural herbal remedies (UNESCO 1994).

Phytotherapy is nowadays practised to differing degrees by people the world over. In most Western countries, folk use of plants is generally known by only a few elderly people who commonly rely on plants for medicine or handicraft, and live in areas characterised by low industrial and urban impact (Pardo-de-Santayana *et al.* 2007; Salerno *et al.* 2005). People from other cultures, on the contrary, have commonly continued to maintain traditional plant uses for economic reasons, and also in an endeavour to preserve their cultural identity (Paulino de Albuquerque *et al.* 2007; Ali-Shtayeh *et al.* 2008; Okigbo *et al.* 2008). For example, ethnobotanical studies have confirmed that native plants are the main constituent of Traditional African Medicine (Cunningham 1997; Massamba N'siala *et al.* 2006). The WHO encou-

rages to maintain this major African socio-cultural heritage by developing traditional medicine in order to sustain health and perpetuate culture in that continent.

In the Mediterranean area, some herbal markets still comprise traditional shops selling hundreds of medicinal plants. For example, a study in Mersin and Adana, in Turkey, demonstrated that 107 species common in herbal markets are currently mainly used for intestinal disorders, urinary tract system disorders and skin disorders (Everest and Ozturk 2005). In Thessaloniki, an inventory of 172 taxa was constituted of 58% plants collected from the wild, 77% plants of Greek origin, and 54% herbs already mentioned by Dioscurides in his *De Materia Medica*, written in the 1st century AD. Ethnobotanical studies demonstrated that the utilization and trade of Dioscurides plants remain uninterrupted, dating from ancient times (Hanlidou *et al.* 2004).

What gives health to the body, can give health to the spirit. Anthropological and ethnobotanical research show that plants, and especially medicinal plants, would have been used as votive offers to Gods, expressed in several ways, such as feasts, rituals and art. «*Plants and animals which are considered to be anomalous and abnormal in their behaviour or morphology often serve as symbolic mediators, known for their special ability to cure, nourish, and protect people*» (Martin 1995: 115).

An earlier link between plants and rituals, dating back to the end of the early Holocene, was suggested by archaeobotanical evidence. The case refers to the Uan Afuda cave, a fascinating archaeological site in the Central Sahara (Libya) which was inhabited by hunter-gatherers (di Lernia 1999). Multidisciplinary data proved that humans and ovicaprines cohabitated in the cave. A 40 cm-thick dung layer from the ovicaprines was found in the inner area, 60 m from the entrance. It dated to approximately 7300-6600 BC. Archaeobotanical analyses showed macroremains and pollen (Castelletti *et al.* 1999; Mercuri 1999). *Echium* was the dominant pollen (>90%). This Boraginaceae genus includes herbs browsed on during lean periods, but contains pyrrolizidine alkaloids (PAs; Boppré *et al.* 2005). PAs give the plants a bitter taste and make them toxic to different degrees depending on plant physiology, dose ingested, species and health of animals. Sheep and goats are the most resistant, other animals can be poisoned or killed, while in humans it results in liver diseases (ANZFA 2001). The sub-fossil dung was continuously accumulated because animals were penned in the cave, and humans brought herbs to animals which were not moving freely in the external environment. As *Echium* was not an appetizing herb, it was expressly chosen for feeding animals, while food plants (highly nutritional wild cereal Poaceae) were gathered for human consumption and accumulated in the atrial part of the cave (Mercuri 2008). Was *Echium* the

most available, non-cereal, plant in the region or, possibly, was it even used to induce poisoning or some reactions in animals? The likelihood of the second hypothesis relies on certain considerations (di Lernia and Mercuri 2001): *Echium* is more dangerous for humans than for ovicaprines and the animals' resistance to toxins could have led humans to believe that the animals had a special power; the chemical risks were experienced involuntarily and thus discovered by people; the less resistant animals may have experienced strange poisoning symptoms under the effect of a 'magic' plant. Therefore, fodder rich in *Echium* may have been used to make animals restless in captivity and suitable for use in rituals, as suggested by some rock art paintings of the area (for detailed discussion see Mercuri 1999).

Prehistoric societies believed in both the natural and supernatural (Levy 1981), toxic plants were commonly considered magic and some psychoactive drugs were good symbolic mediators. «*Human foragers must have had some degree of receptivity to possible remedies or ways of achieving altered states of mind. This entry will point out that the discovery of altered consciousness and of remedies for ills have been, and still are inextricably interconnected. Anthropologists, using their holistic perspective in examining how herbal remedies and mind-altering drugs fit into the lives of the people who use them, have provided especially useful information and perspective on human variability related to drug use*» (Page 2004).

In prehistoric cultures, shamans or medicine men are deemed able to influence powerful spirits. Amerindians used tobacco as a narcotic with which they communed with the Gods: a leaf was dried and crumpled into a powder; this was mixed with white ash and seawater, dampened and placed between lip and gum (<http://www.antiguamuseums.org/prehistoric.htm>). Traditional medical practitioners in the Ecuador highlands, named 'curanderos', make extensive use of magical plants, which may be gathered in the wild, purchased in local markets or cultivated in home gardens, for treatment of supernatural folk illnesses (Cavender and Albán 2009).

Modern prehistoric societies and communities still using traditional medicine have a similar vision of plants: they both help us to understand how many interlaced links there have been between 'biological' and 'spiritual' needs over time. Jacques Mabit, who organized the 'Conference on Traditional Medicines, Interculturality and Mental Health' (June 2009, Tarapoto-Perù) wrote that traditional medicines can be used to treat bodily health as well as «*mental health problems which have often been viewed as culturally specific problems, [...] these treatments have been seen as effective only in this specific context. However, empirical medical experience appears to demonstrate the opposite*». Based on his experience of addiction treatment, he affirms that many indigenous

practitioners' plant-based therapeutic techniques have a transcultural dimension, responding to human constants that are invariable or archetypal (Mabit 2002).

Actually, human/plant relationships that emerge from archaeological evidence seem to follow, both now as in the past, the same rules the world over (Pearsall 1992). According to Diamond (2002), manipulating plants must have forced changes in human behaviour alongside our cultural evolution. The economic, or simply useful, plants were known, looked after and transported into settlements. Plant remains collected in the past are found today in high amounts in archaeological sites. They testify to a need to put particular species selected from those available in a territory to diverse purposes (Faegri *et al.* 1989; Kelso *et al.* 2006; Mercuri *et al.* 2006b; Tipping 1994). More specifically, they are evidence of past human behaviour in territory management and plant use, and help build reconstructions of the environmental frame of cultural evolution (Mercuri 2008; Mercuri *et al.* 2006a; Wasylikowa 1992).

What emerges from the few examples mentioned above is how many ways there are to study past and present plant/culture relationships. Different intermingled approaches are offered by prehistoric and historical archaeobotany, anthropology, ethnobotany, including ethnopharmacology. Others (not discussed here) include linguistic, horticultural and agrarian sciences, iconography and history of art.

The history of gardens reflects physical and conceptual relationships between nature and humans that changed in space and time and largely mirror the different cultures (Moggi *et al.* 2005). In general, gardens are 'places of order', an idealized order of nature and culture, involving garden design and landscape architecture studies aiming at creating a pleasing environment that serves our needs with respect to place and space and our primal feelings toward the earth (Francis and Ester, 1992; Messervy 2004). Also the representation of plants in art had changed over times reflecting both different chronological phases and the perception, sensibility and knowledge of artists. These variables have always influenced the proportion of the *real*, *ideal* and *symbolic* involved in the representation of plants performed by different cultures (Caneva *et al.* 2005: 86).

The topic is so extensive and multifaceted that it far exceeds the scope of this paper. Generally speaking, when dealing with plants, uses and traditions are passed down through time and culture, overcoming geographical boundaries.

Plants are an exceptional medium for interculturality.

This 'old yet new' concept was fully accepted by the EACEA (Educational, Audiovisual and Culture Executive Agency) committee when financing the PaCE project (Mercuri, this volume). Significant relationships among plants and culture were presented in the pan-Eu-

ropean PaCE exhibition by the partners of this EU Culture Programme project. Some traditions and histories, narrated by the experts from different nations who wrote the exhibition posters, show clear links between the past and present of a number of European countries (all the posters are featured in the virtual exhibition at www.plants-culture.unimore.it/exhibition). To mention just a few examples, the exhibition recounts common practices, significant plants or archaeobotanical evidence from the eleven countries involved, such as the following (with poster authors' names given in brackets):

- The ways in which people name plants reflect the country's ethno-psychology, its national history and geopolitical position, and provide a clear insight into national spiritual culture and heritage. Plant names are very creative. For example, *Aquilegia vulgaris* is named "kandilka" (i.e., old oil lamp) in Bulgarian, "Haseki küpesi" (i.e., Haseki's earring) in Turkish, and granny's nightcap in English (poster written by Anely Nedelcheva - Bulgaria).
- The popular practice of leaf-throwing (*Phyllobolia* from ancient Greece, by Eurydice Kefalidou), which probably began in early agricultural groups and spread to honour triumphant athletes, benefactors and newlyweds, is a way of participating in an event from a distance. It is a symbolic act that marks a change in a person's status, upon completion of a particular process, whereby the focus of attention accepts social approval within an emotionally charged atmosphere of mutual solidarity. This practice still survives today in the form of confetti, and the rice thrown at a happy couple at a modern wedding to wish them fertility and a long-lasting marriage.
- The recovery of allochthonous plants living near places formerly inhabited and then abandoned by humans is important to trace the history of the present landscapes (such as near lighthouses, summer farmers and ancient monastery ruins in Norway, by Dagfinn Moe and colleagues). Sometimes exotic plants take on key relevance for a city's economy, which has even occurred over the last few centuries, such as the *Phoenix* and *Citrus* species grown in Hyères Les Palmières (France, by Martine Sciallano and Nathalie Erny).
- Plant motifs which decorate buildings in European cities generally follow models from Greek and Roman classical architecture, and may change during different historical phases. The city of Krakow boasts a number of buildings decorated with ornaments on a plant or plant part theme, such as flowers, fruits, leaves, in the stylized form of garlands, festoons and cornucopias. The earlier plants used for decoration feature laurel, olive, rose, date palm, oak, but at the turn of the 20th century, in the Secession architectural period, new plants, such as horse chestnut, maple, edelweiss, clover, iris were introduced to the build-

- dings' walls. All together these plants form the *Herbarium Murorum Cracoviensis* (Krakow-Poland, by Alicja Zemanek and Bogdan Zemanek).
- Some plants have a similar cultural value in many different countries. For example, *Viscum album* (Romania, by Maria Catalina Popa and colleagues) is a semi-parasitic evergreen and medicinal plant which was bathed in an aura of mystery as a magic plant. This plants had a sacral value in Greek and Roman cultures, and probably it is the Golden Bough of the Aeneid as Virgil compares it with mistletoe (Frazer 1890). Mistletoe was considered a 'gift from heaven' because it does not grow in soil, as well as a symbol of endless life because it is an evergreen. In the past, Celts used a gold knife to cut mistletoe which was believed to have felt down with a lightning as a divinity from the sky. This plant was collected using an arrow or a pole rather than by hand (Cattabiani 2008). Mistletoe remains alive in winter when the host plant appears dead, from whence stems the belief that it has the power to open the way to the next life and to bring luck. That is why it is brought into homes on Christmas Eve and New Year's Eve, to keep demons at bay and misfortune away.
 - The archaeobotanical remains from underground are key evidence for the reconstruction of the environmental setting and food history of many European locations (Pest County-Hungary, by Brigitta Berzsényi and Orsolya Dálnoki Mermod; Domagnano-San Marino, by Paola Bigi and colleagues; Jure Vetere-Italy, by Dimitris Roubis and colleagues; Begues and Mallorca-Spain, by Jordi Tresserras Juan and Juan Carlos Matamala), or cities renowned throughout the world (Ferrara-Italy, by Giovanna Bosi and colleagues; Pompeii-Italy, by Annamaria Ciarallo).
 - Plant remains from archaeological sites help to reconstruct travels, food, ornamental plant import and goods exchanges. Examples include the spread of the peach by Romans from Eastern countries throughout Europe (Rome-Italy, Laura Sadori and colleagues), and the discovery of mercantile Byzantine shipwrecks. The cargo carried by these ships included cereals (barley and wheat), a wide range of nuts and fruits, probably wine, and spices (coriander), and this helps us to understand better the marine trades and plant-based economy of the Byzantine Empire (Istanbul-Turkey, by Emel Oybak Dönmez and Özgür Çizer).
 - Finally, some archaeobotanical records emphasise plants that were used largely in the past but are almost forgotten today. Among the small fruits now neglected, *Cornus mas* is worthy of note as a fruit crop that has fallen into disuse in many areas. It was found, for example, in the Százhalombatta-Földvár Middle Bronze Age site (central part of the Carpathian Basin-

Hungary, by Brigitta Berzsényi). Endocarps from this shrub are frequent, and sometimes dominant, in European Bronze Age sites (Dubene-Sarovka, between Bulgaria and Thrace, Early Bronze Age: Marinova 2003; San Lorenzo a Greve, Florence-Italy, Middle Bronze Age: Mariotti Lippi *et al.* 2009; see also Kroll 1995). In fact, most food plants were collected in the wild to be eaten raw, and possibly used to make alcoholic drinks (Terramara di Montale, Modena-Italy: Mercuri *et al.* 2006a) or even employed in handicrafts and shepherd's crooks, as still occurs today (Salerno *et al.* 2005). Speaking of the Golden Age in Metamorphosis, Ovid wrote: «*And Earth, untroubled, - Unharm'd by hoe or plowshare, brought forth all - That men had need for, and those men were happy - Gathering berries from the mountain sides - Cornelian cherries, or blackcaps, and edible acorns*». Besides being gathered in the wild, cornelian cherries may also have been grown since the Neolithic (Castelletti *et al.* 2001). Actually some morphological changes (more elongated shape) under anthropic pressure were observed in sub-fossil endocarps in records running from the Bronze Age to the Roman found in north-Italian archaeological sites (Bandini Mazzanti *et al.* 2005). Cornelian cherry was commonly used in Roman times (Bandini Mazzanti *et al.* 2000), and then in Mediaeval Ages (Ferrara, by Bosi and colleagues: Bosi *et al.* in press). The plant was grown in monastery gardens in continental Europe through the Middle Ages. It was introduced to Britain in around the 16th century, and was common in gardens, where it was grown for its fruits by the 18th century. The fruit was familiar enough to be found in European markets even up to the end of the 19th century (Reich 1996). At present, Turkey is an important producer of cornelian cherries (*Cornus mas* L.), especially in northern Anatolia, and its potential for cultivation in monoculture is under study in other eastern countries. Seed propagation and long-term human selection has given rise to a great genetic diversity of these plants (Ercisli *et al.* 2008).

To sum up, recent research helps bring renewed importance to botany, from the recovery of forgotten food resources to the revival of traditional medicine and the rediscovery of cultural identity, in Europe as well as in developing countries.

Following guidelines issued by the USA National Research Council Committee which, in the '90s, declared that «*the sense one gets of the stature of research on plants among scientists and the public seems to have declined in recent decades*», botany has rapidly transformed to meet the needs of current and future life sciences, addressing its attention to subcellular, cellular and organismal processes. Current trends and the future outlook for plant genetics, agricultural sustainability and inter-

national development are topics of dedicated symposia (for example, a symposium on 'Plant Sciences in the 21st century' was hosted by the UC Davis' Department of Plant Sciences and the College of Agricultural and Environmental Sciences, in 2005).

But this is only a part of what we can derive from knowledge of the plant world.

I agree with Olmstead (2006), who stated that 'the decline of taxonomic expertise is a serious problem at a time when loss of biodiversity is widely recognized as a global problem', and botany today is able to face the challenges of climate change and global conservation.

This is probably not enough to motivate a wide audience that is more sensitive to economic trends than to ecological urgent problems. Possibly the emerging problem of multiculturalism, now contemplated by politicians in terms of social and market problems, is a new and unexpected topic of interest for botanists. In a both real and metaphorical vision, plants have provided initial examples of multiculturalism, as they have enabled the integration of different countries so comprehensively, in a way that remains only theoretical on other issues. The *plant food revolutions*, from the Middle East Palaeolithic 'Broad Spectrum' to the Neolithic (Weiss *et al.* 2004), and the New World plant introductions in Europe in the 15th century, are examples of the fabrics that plants have continuously woven around humans. Quoting a very grass-roots aspect of Italian culture (my own), the renowned dish that is spaghetti served with tomato and olive oil brings together Asia, America and the Mediterranean basin, at least three continents on a plate. A humorous example, I hope, that offers a light-hearted way of promoting the positive effects of interculturality.

Appendix 1

The text of the presentation of the pan-European PaCE exhibition reported in the web-site of the project:

<http://www.plants-culture.unimore.it/calendar.htm>.

That plants have always held an essential value for human life may be obvious, but nevertheless it is true. Despite this, in the IT- and technology-oriented societies of 21st century Europe, plants are largely disregarded.

Most people are unaware of the role plant derivatives play in a number of their everyday activities, whether it's baking a mouth-watering cake, sipping a favourite brandy, relaxing in a chair, or slipping on a pair of jeans. Nowadays, though, a great deal of ancient botanical ingredients have been replaced by artificial chemical products.

We select our fruits unknowing whether they come from tall exotic trees or common low-lying shrubs; for this information is of no matter to us, modern-day hunter-gatherers, when we are searching for food in supermarkets as our ancestors once did in forests. Because of the decline in farming in many countries, and likewise the perception of

seasonal rhythms (largely marked by plant life cycles), relative popular traditions are gradually disappearing.

The outcome of this general loss of plant knowledge is that most people are no longer aware of the importance of plant use in their lives. Plants are generally perceived as limited to the realms of either ecologists or intellectuals and therefore any consideration of plant issues today is implicitly viewed as superfluous. Nevertheless, even today, plants provide for primary needs, such as food, medicine, clothing, tools, furniture and homewares, as well as social needs, such as body painting, make-up and ornaments, and are also common symbols and emblems.

They have also always been employed in ceremonies and religious rites, thereby fulfilling transcendental needs.

The aim of this pan-European exhibition, 'Plants and Culture in the history of Europe', is to show the importance of plants in building a European identity.

As part of the European Culture Programme (2007-2013), a network containing dozens of researchers has been involved in a complex joint project to present a new and unique set of stories. These cover botany, archaeology, plant use throughout history, and popular traditions from eleven European countries, offering also a brief glance at European botanical history. The exhibition is based on the concept of Europe portrayed through plants, in the hope that the roots of our past become the seeds of our future.

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