

THERMALISM BETWEEN PAST AND FUTURE

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1. Introduction

Passage from classic myths of the creation to rationality doesn't exclude the persistence of consecrated aspects coexisting with the observation medicine.

At least until XIX century, medicine was not always able to assure a safe recovery and therefore people looked for miraculous beliefs linked to the environment as the right link between patients and preternatural world where medicine had failed.

Among environmental factors, the most important is undoubtedly water, the historical miraculous source. Search of health has always been linked to presence of water, as thermal baths, which became since the XIX century spas for treatments and regulation of functions of human organism.

To tell the truth, however, in spite of the historical importance of water as an efficacious health remedy (see Hippocrates work), the discussion about environment and health started only from the middle of last century thanks to the remarkable contribution of some International or Research institutions (OMS, Schools of Public Health of London, Boston and Baltimore). They nourished a strong collation between ancient and modern consideration of relations between natural elements and diseases, superstitions and scientific progress, official political institutions and individual researchers (Angeletti, 1995).

In such a discussion water has always represented the hauling and main element. From a historical point of view, water has played a fundamental role both for human and productive settling down (mouths, nomadism) (Cancellieri, 1995) and for popular religiousness. The first version was linked to everyday survival much more than alimentary needs coming from hunting, stock-raising and agriculture. Popular religiousness has instead covered all water places with guardian Divinities and ritual immersion has always represented a twofold function: sacral and social, a sort of rebirth through the purification of the body.

From a technical and functional point of view, there is no doubt that water actually represents the most effective and symptomatic informer of environmental emergency and particularly of the physiological balance requested between activity of people and activity of the surrounding nature. In fact the most risky pathological events of mankind (ruinous floods, climatic changes, pollution of water-bearing strata, harvest destruction, drought, etc.) depend on presence or lack of water, on protection or carelessness (Vegetti, 1995).

The curative use of thermal water is mentioned for the first time by Philostratus (Hersicus, 3, 35) in relation with injured Achaean warriors who, coming back from Troy, dipped as therapy in the thermal sources in Smirne, which were later called "Agamemnon's Baths".

Therefore the connection between thermal and curative water sources and volcanic phenomena has always been clear. It means that quality of water and its temperature are exclusively connected to the geological structure of the soil where it flows, and that ancient people attributed a mythical link between health and volcanism.

Therefore in the ancient Greece, the most important spas are those of Asclepieae (in Kos and in Girtina in Arcady) and those of Heracles (in Termopili and in Adepso in Eubea) which were situated near medicinal water sources where patients were subjected to a purification rite even with therapeutical effects. In Gadara in Judea (present Ain Gader) there are important spas to treat leprosy, second only to Baia and still famous in the first centuries a.D.

Even the Etruscans and the ancient Italic peoples gave a great importance to the therapeutical use of water.

To mention are "Thermae Ceretanae" (present Bagno del Sasso in Cerveteri), and the famous "Fontes Clusini" (Chianciano), "Acque Populoniae" (Bagni di Caldana) and "Thermae tauri" (Bagni di Ferrata near Civitavecchia). Some of them have been working until the Roman Empire and some still work today.

Hydrotherapy knew its maximum level with Romans who were able to give it a collective and public aspect. The coming of the Principality brought big water works, as aqueducts, which let thermalism develop not only near the water sources but also in the city.

This represented a Copernican revolution for thermalism which assumed a twofold function: therapeutical with medical and control centres and social with special areas for men and for women where they could relax and have contacts with other people. In this way the original Greek spas began to change and to lose the mystic and religious pregnancy typical of Greek spas of Asclepio and Eracle which were placed near water sources.

The biggest Roman spas were directly financed by emperors: Spas of Nero, Titus, Tiberius, Trajan, Caracalla, Domitian such as the many imperial villas with complete thermal system as Heliocaminus in the Hadrian's Villa in Tivoli, or the thermal system of the Villa in Piazza Armerina in Sicily (beginning IV century a.C.). Both spas and villas were all equipped with an efficient and rational system for water thermoregulation - from very hot to very cold.

Among the many authors who have always exalted the therapeutical use of thermal water, we would like to mention Asclepiad from Prusa (I century a.C.), Cicero's friend, Virgil (Aeneid IX), Seneca, Vituvius (v. VIII of *De Architectura*), Antonio Musa who healed Augustus with cold baths, Pliny the Elder (*Naturalis Historia*), Galen and, above all, Celso who explicitly exalted the spas of Baia and water as healing mean for the body (Melillo, 1995).

In this way, the development of thermalism started by Romans with waterworks in the cities, went on with the exaltation of spas in Baia and in Campi Flegrei for a wide range of pathologies both for hydrotherapy and for crenotherapy thanks to the volcanic origin of water and its diversified physical-chemical and thermic composition. Thanks to its genetic features, thermalism succeeded in keeping its value also after the end of the Empire when the crisis of the city, destruction of part of aqueducts and the downfall of big thermal systems irreversibly quickened the crisis of hydrotherapy in the artificial spas of the big towns but not in the natural ones (as Campi Flegrei) which continued to be attraction poles for many pilgrims-patients during Middle Ages and Renaissance.

Thermal sources were also exploited in many other European countries although people were still linked to local healthy Gods. To mention are: Badenweiler spas in the Black Forest (80 a.C.), famous *Aquae* spas (today's Baden Baden) which became later "*Aquae Aureliae*".

In France spas were appreciated by people who had already tested abroad the effectiveness of water treatment.

In Britain it is to mention the spa in Bath which is still operative.

2. Importance of thermalism in relation with environment and health.

Laicality of medic thermalism in ancient Rome reinforced more and more during the illuminism and consolidated in the XVIII and XIX centuries. Many important scientific institutions (Associazione Medica Italiana di Idroclimatologia, Talassologia e Terapia Fisica, founded in Bologna in 1888) and many famous academy schools (Scuola Romana di Idrologia Medica, founded in Rome in the 30s by Mariano Messini) were founded to study thermalism. These studies contributed to give to thermalism some more Galilean aspects and let it lose the traditional Aristotelian features.

This big interest towards thermalism brought to the need to create official chairs of Medical hydrology in Italian universities (today, besides the chair in Rome of Messini, there are the chair in Thermal Medicine of Prof. Giuseppe Nappi in Milan and that one in Medical Hydrology of Prof. Enrico Lampa in Naples).

From a merely didactic point of view, there is no doubt that the academic placement of Thermal Medicine has to be in the Faculty of Medicine even if in two different studying fields: the sanitary and the mining. Unfortunately a real thermal sanitary policy with efficient systems still miss in the whole country.

Ischia becomes the authentic and official promoter of a legislative enterprise whose aim is to sponsor in Italy and world-wide the importance of Thermal Medicine with a strong corroboration aimed to turn the plenty of National hydrologic patrimony and sanitary and receptive systems to better account. This plan is linked to the innovative planning of modern,

urban development which can definitely and irreversibly overcome the environmental conditioning and the atavic Hyppocratic theories about natural determinism.

The relation environment-health is destined to play a priority role for the current national and international economic scenery as far as medical system concerns. Since 90s the index of human development has palpably indicated the qualitative way of development by replacing the old quantitative parameters and therefore the average life duration and the infantile mortality have been influenced from the equal distribution of wealth both in developed and in developing countries (Monti, 2000).

In the developing countries the raising of incomes brought to an automatic decrease of infantile mortality while in developed countries it brought to a more equal distribution of wealth among the different classes of society and all over the country.

On this matter it is interesting to mention the example of Japan and Great Britain in the 70s when they had a similar distribution of wealth and life duration. At the end of 80s, these parameters have been clearly differentiated because Japan had a more balanced distribution of wealth together with a longer life duration (today it is the longest one in the world) while Great Britain had a more unbalanced income distribution and a life duration shorter than that one in Japan.

This demonstrates that although the health services not always represent the main motives of the health conditions of a country, their distribution is always considered as a priority event in many countries (McKee, Sassi, 1995).

Of course this policy aims in the developed countries to increase the economic growth and the consolidation of the preventive medicine and of the fundamental clinical services and in the developing countries to encourage the difference and competition in supplying healthy services and improving techniques and personnel that manage the systems. It should try to control costs and to involve the whole community. It is necessary in fact to optimise the use of resources by conciliating sense of duty of medical profession and economic reason in order to warrant a long and healthy life to the world population (Boccia, De Giusti, Del Cimmuto, 1995).

From the second half of last century, relation thermal baths-territory has consolidated more and more and has become a fundamental element in the contemporaneous history of national and international tourism.

In the last century thermal sector had the same growth of general tourism and also a similar contraction of the average duration due to spreading of autonomous jobs, increase of people working in this sector, long and stressing working paces that request frequent and short breaks during the year.

3. Tourism in Ischia and the three phases of building expansion.

In order to counter-balance the reduction of tourists' presence and the average duration, it has become necessary to attract a growing and remarkable number of Italian and foreigners with an aimed variety of services. These services have to cover a wide range of interests, from conferences to fitness activities. In this way it is possible to turn thermalism to a better account by creating a kind of quality-mark which give to the guests the possibility to exploit not only the thermal systems but also the global tourism. It becomes than necessary to revalue the beauty of the places, of the artistic and cultural inheritance, sport activities and conference dynamism.

Whereas, like in Ischia, the thermal product has a very big importance from a therapeutical point of view, it is important to let this potentiality emerge through a more aggressive and detailed marketing policy which will be able to bring back all those foreign tourists who in 80s and 90s chose other tourist destinations because of the lacking of competition of Italian spas.

This could only happen through an effective requalification of the professional training and a decisive improvement of general services by involving the whole thermal world with its fundamental qualities, like the "naturalness" of thermal therapies which guarantees the lack of unwished effects of many other pseudo-medicines.

According to a recent statistic which takes into consideration the medical and curative services, the number of hotels, sport activities and surrounding beauty in a whole (Qui

Touring, 1994), Ischia holds the second place, after Abano and before Montecatini, Montegrotto, Salice and Salsomaggiore, etc.

Italy has more than 200 thermal places where thermalism represents the main income source.

Germany has already approved a law to avoid the proliferation of thermal places.

Italy instead doesn't have a specific programme to regulate the exploitation of thermal resources and this causes many problems to local civil administrations and allows a constant and worrying proliferation of spas (today they are about 300) which results to be deleterious for those places, like Ischia, where thermalism has demonstrated on scientific basis to have effective therapeutical properties.

As Italian Government has demonstrated to be laxist and absconding from a juridic and administrative point of view on this subject, I am of the opinion that the Ischia touristic and thermal world should make a deep inspection aimed to carefully evaluate the starting presuppositions and the sector prospects at short and at long maturity.

It is well known that touristic development caused an intense urbanization process on the island not only with the building of hotels and second houses, but also of civil and recreative infrastructures as streets, swimming-pools, tennis-fields, restaurants and so on. From 1961 till 2001 this urbanization process brought to a huge building increase in all insular departments particularly in Forio (+2309%), Serrara Fontana (+1622%), Barano (+1295%), Ischia (+1143%), Casamicciola Terme (+400%). In the whole island it increased from 4.82% to 36%.

In the same period, the unproductive surface of Ischia increased from 18.21% to 47.4% even as a consequence of the moving from the countryside. It allows to identify three different phases which reflect the social and economic needs. The first period (51-71) can be defined "adjustment" and regards the need of a higher standard level because the everyday life was characterised by a very low standard with small houses without adequate hygienic conditions, running water and other primary services.

The second period can be defined "expansion" (71-81) and has been characterised by the generalized exploitation of the utilisable space due to a relative discretion of local administrations as far as building concessions concern (on the island 6500 new houses were built in this period). These concessions allowed to many local people to build new houses or to repair old immovables which were afterwards sold to non-residents. Many residents also decided to sell their main houses in the centre (and therefore more expensive) to non-residents and to move to the country-side.

The third phase, "accumulation", (since 1981) has been characterised by the investment of huge capitals in the estate market although the new buildings were not built to directly live in. In only a ten-year period (from 1981 to 1991), 4.700 new houses were built in Ischia bringing the building patrimony to 24.000 houses - 100.000 rooms. 17% of these houses does not belong to residents and was realized illegally because of the lack of a town-plan. This datum can be evicted by the high incidence of "sanatory" requests which followed the Remission law in 1985 (61% of house owners) and in 1994 (34% of house owners) (Mazzetti, 1999).

As such a building development has been constantly accompanied by a yearly rising touristic trend - in the last 30 years it quadrupled -, it becomes necessary to reflect on the supportableness of such a developing schema of Ischia tourism.

Ischia actually hosts more than 80% of tourists of the Parthenopean archipelago, 587.503 arrivals (out of total 724.712) and 5.480.000 presences battendances (out of total 6.369.727) (average biennium 2000-2001) during the whole year although Italian people do mainly come in Summer and foreigners in Spring and in Autumn for thermal treatments.

Tourists can choose among different receptive possibilities. Luxury hotels (about 30.000 nights) offer their services to less than 1% of tourists who visit Ischia and most of them are Italian. Foreigners normally spend 7 nights and Italian people 6 nights in a luxury hotel.

This gap among foreigners and Italian people comes down in 4 stars hotels which normally host about 32% of all tourists in Ischia (70% Italian and 30% foreign tourists) and humbles itself in 3 star hotels (46% of tourists in Ischia).

Here other information (1996):

2 star hotel: 14% of tourists in Ischia, Italians 85,1% and foreigners 14.9%

1 star hotel: 4.7 of tourists in Ischia, Italians 96.1% and foreigners 3.9%

Residences: 3.3% of tourists in Ischia, almost only Italians, foreigners 2%

These data indicate that foreigners, principally German people, choose both luxury hotels and decent intermediate hotels while Italian people either choose luxury hotels or inferior hotels.

Customers of other receptive systems are so divided: 23% in rented houses, 2.2% in campings and 75% in private houses. In this case Italians (79%) use this accommodations much more than foreigners (21%).

It results that hotel tourism is mainly foreign and composed above all by German, Swiss and Austrian people who stay on average 11 days, much longer than the stay in other famous places of Campania and of the whole peninsula. They precede other groups coming from other countries (Scandinavia, United Kingdom, Benelux, Russia, US) who stay for a relative long period and visitors who want "to sightsee and run away" (Japanese people). (Ruocco, p. 44).

Foreigners in Ischia represent more than 40% of the total of the whole Neapolitan district (arrivals = 30%) and our island is at the first place before Sorrento which is first as far arrivals concern.

With such an articulate frame, it is necessary to think about the risks of a dangerous environmental break-down and at the consequent decrease of tourism and to try to find in advance the ways to face the situation. Indicators of this situation may be interpreted from different points of view. It is possible to consider the physical capacity if we take into consideration the number of tourists that a place can host, the ecological capacity which can represent the endurableness of the environment to tourists and a psychological capacity which refers both to tourists and to local population. It considers the number of people on the beaches, autos on the streets or in the parkings and number of tourists that a place can host without suffering traumata and cultural crisis.

4. A new methodological approach to the problem of Ischia tourism: structural saturation index and temporary saturation index

It results extremely difficult to quantify some parameters which concern, for example, the urbanized surface extension or the real number of touristic "accommodation-places" existing in second or in rented houses and therefore it is necessary to apply to a different methodological approach which is particularly focused on the structural saturation index and on the temporary saturation index which base on official available data.

Structural saturation index (ISS) precisely states the reception threshold that has not to be overpassed in order not to compromise the working of the touristic system.

It is indicated by the formula:

$$ISS = (30\%LX + 10\% LY)/P$$

LX are hotel accommodations; LY are no hotel accommodation (second houses and rented houses for holidays) and P are residents of the examined commune.

The strong pondering of hotel accommodations can be explained with their using average rate in Italy that, including the closing periods, is about 30%, i.e. 110 days a year, an average employment of 10% as far as the no hotel accommodations concern.

According to this index, touristic resorts with ISS bigger or equal to 1 have to be considered full of resorts while resorts with ISS bigger than 2 need radical urban and economic interventions.

The temporary saturation index (IST) shows the maximum level which can be reached in some periods of the year and its overcoming can anyway start the decline of a touristic resort.

It is indicated by the formula

$$IST = (LX+LY)/2LX,$$

LX and LY indicate hotel accommodations and no hotel accommodations and 2LX indicates the double of accommodations in hotels with values inferior or equal to 10.000.

Indexes inferior than 1 indicate touristic resorts which are temporary saturated, indexes included between 1 and 2 underline the acceptable overcrowded levels while bigger indexes show troubles that bring to decline without the carrying on of corrective measures (C. Formica, 2000). Thanks to these indexes, it is possible to have quite precise data about the space impact of tourism on community and environment. They must be, as stated by Mr. C. Formica, alarm-bells which have to induce people to take measures against “development without limits” (building expansion, number of tourists, traffic, etc.). These indexes show a very drastic situation in the 6 Ischia departments and should worry the responsible administrative divisions and the tourist organisations even because both saturation indexes don’t take the numerous Summer pendular people into consideration who represent, in comparison to 100 resident people the following ratio: 123 tourists in Casamicciola; 114 in Ischia and 107 in Lacco Ameno. From these data we can extrapolate a “global saturation index” which allows us to state that when this index is inferior then 1, touristic presence on the island are acceptable (Barano and Serrara Fontana), when it is included between 1 and 10 it arouses worries (Casamicciola and Lacco Ameno) and when it is superior than 10 it shows an excessive anthropic load. (Ischia and Forio)(1).

5. Ischia tourism and needs of equilibrium and bearableness of the present load index

These indexes indicate the impelling need to better distribute the load above all during Summer months when departments host an excessive number of people without having adequate touristic resorts. Only preventive measures can rescue the island from a decline of tourism.

Touristic expansion is increasing more and more and a saturation of the offer is foreseen as also the exploiting of touristic resorts.

The north-east part of the island (Ischia, Lacco Ameno and Casamicciola Terme) is characterized by a bigger touristic movement then the south-west part (Forio, Serrara Fontana and Barano) where people prefer to spend longer periods. This is due to the higher percentage of foreigners in this part of the island, above all in Forio.

Now the point is to decide if it is worth to increase the touristic offer more and more or to stop and increase the actual conditions. We have to add that natural resources (as radio mud and thermal water) of a volcanic island like Ischia have to be considered endless.

”Thermal spas in Ischia are 95 and each of them extracts from the subsoil about 150 cubic metres of water a day, it means 14.000 cubic metres a day. Such a big quantity of water could not have enough time to acquire the normal therapeutical proprieties” (Ruocco).

In this way the island risks to alter the potentialities of the soil and to loose its characteristics which make it different from many other touristic resort.

The increase of tourists has not to undeceive because we really can’t know how long the “load capacity” will be able to support these overcrowded conditions of the island.

As I already stated some years ago, in Ischia it happened the opposite of what had been ratified by the “Manila declaration” in 1980 in the bosom of OMT according to which requests of tourism must not be subjected to economic and social interests of residents, to environment, to natural, historical and cultural resources which are the fundamental attractions of tourism (Monti, Turismo, ambiente e sottosviluppo).

Environmental alterations can devaluate the resources above all in those areas (like recently on the coast between S. Angelo and Capo Grosso) where there are continuous crumbling and erosive phenomena which cause big damages to the buildings which are placed below and since 1969 the shores pull back of about 1.5 meter a year.

It would be necessary to manage Ischia by considering that tourism needs a co-ordination and a planing for its development with the active support of the administrative power.

The many social and cultural implications of tourism cannot and must not interest only the entrepreneurs but above all the competent authorities which should play their real roll of guarantors of common interest.

Tab. n. 1. Evolution of hotels capability (1961-2000)

| YEAR | HOTELS | INCR. % | ROOMS | INCR. % | BEDS | INCR. % |
|------|--------|---------|-------|---------|--------|---------|
| 1961 | 98 | 2.359 | | | 4.059 | |
| 1971 | 194 | 97,9 | 5.591 | 137,0 | 9.545 | |
| 1981 | 272 | 40,2 | 7.703 | 37,8 | 13.568 | 42,1 |
| 1991 | 291 | 6,9 | 9.753 | 26,6 | 17.801 | 31,2 |
| 2000 | 294 | 1,0 | 9.979 | 2,2 | 18.341 | 3,0□ |

Tab. n. 2. Arrivals, departures and permanences of Italians and Foreigners in the island of Ischia (average 2001-2002 - Es. alb.)

| | ITALIANS | | | | FOREIGNERS | | | | FOREIGNERS | | | |
|----------------|----------|------|-------------|------|------------|------|-------------|------|------------|------|-------------|------|
| | Arrivals | | Permanences | | Arrivals | | Permanences | | Arrivals | | Permanences | |
| | N. | % | N. | % | N. | % | N: | % | N. | % | N. | % |
| Barano | 9.224 | 3,4 | 74.200 | 3,3 | 5.500 | 3,3 | 53.050 | 3,1 | 14.724 | 3,4 | 127.250 | 3,3 |
| Casamicciola | 40.800 | 14,9 | 361.650 | 16,2 | 18.420 | 11,3 | 194.621 | 11,5 | 59.220 | 13,5 | 556.271 | 14,3 |
| Forio | 65.738 | 24,1 | 586.290 | 26,3 | 68.220 | 41,7 | 735.080 | 43,5 | 133.958 | 30,7 | 1.321 | 33,7 |
| Ischia | 113.000 | 41,4 | 840.300 | 37,7 | 45.008 | 27,5 | 440.585 | 26,1 | 158.008 | 36,1 | 1.280 | 32,7 |
| Lacco Ameno | 31.500 | 11,4 | 270.800 | 12,0 | 16.150 | 9,8 | 150.025 | 8,9 | 47.650 | 11,0 | 420.825 | 10,7 |
| SerraraFontana | 13.008 | 4,8 | 94.280 | 4,2 | 10.470 | 6,4 | 115.075 | 6,9 | 23.478 | 5,3 | 209.355 | 5,3 |
| TOTAL | 273.270 | 62,5 | 2.227.520 | 56,9 | 163.768 | 37,5 | 1.688.436 | 43,1 | 437.038 | | 3.915.355 | |

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