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AN INVESTIGATION OF THE MEDICAL USE OF THERMO-MINERAL SPRINGS
FOUND IN MISASA (JAPAN) AND JÁCHYMOV (CZECH REPUBLIC)

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This degree is awarded by Oxford Brookes University.

**This thesis is submitted in fulfilment of the requirements of the award of
Doctor of Philosophy.**

Date: October 2012

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“Illness comes from ki”

(Japanese proverb)

Abstract

This thesis presents an analysis of the beliefs and practices surrounding balneotherapy, a technique that uses waters of natural mineral springs for healing. Balneotherapy as employed in the treatment of mainly chronic, incurable and painful disorders will be used as a tool for revealing the pluralistic medical belief systems in the two cultures chosen for this study, the cultures of Japan and the Czech Republic.

This is an ethnographic study based on fieldwork which was carried out in two locations - Misasa Onsen in Japan and Jáchymov in the Czech Republic. Linked by the presence of natural mineral springs with similar properties, by historical connections and by the existence of medical establishments practicing balneotherapy these spas made suitable locations for the study of medical practices and beliefs in different cultural systems of medicine. ...

The two countries support a pluralistic cultural system of medical care into which both cosmopolitan and ethnomedical sets of values are incorporated. While the involvement of cosmopolitan medicine showed great similarities between the two cultures the patients' constructed experience of illness showed many differences. This thesis argues that these differences are due to cultural factors belonging to the domain of active response to illness acquired during acculturation and deeply embedded sets of cultural notions of illness, health and healthcare. The thesis investigates these cultural factors and sets them in the frameworks of several cultural constructs some of which are common to both cultures but most of which are unique. The practice of balneotherapy in the two countries has developed and changed since the adoption of its theory in the nineteenth century. What has emerged in both cases is a complex method of holistic healing comprising both physiological and psychological elements. It is hoped that this study added to the knowledge of the meanings contained within the medical cultural systems of Japan and Czech Republic.

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Chapter 1: Introduction

Social change, combined with significant advances in medicine and falling birth rates have led to societies of much of the economically developed world being associated with skewed demographics in which the old will soon outnumber the young. Such development will in these societies give rise to an ever-increasing proportion of the population experiencing chronic diseases and ailments that are of themselves incurable. The demand for therapies that, while not curing, are nevertheless instrumental in enhancing the feeling of well-being will therefore be increasing. Balneotherapy (from Latin *balneum* - bath), a natural approach to health and healing that uses thermal spring water, gas and mud as therapeutic elements (Altman, 2000; Dvorjetski, 2007) represents one these therapies. It holds an important place among the several complex remedies that provide an alternative to Western biomedical approaches to issues of health and illness. In this thesis I am going to focus on Balneotherapy and consider how its theory, with its Greco-Roman origins, is applied in medicine in two communities widely separated by geography and culture. They are, however, linked by many aspects of the practice of Balneotherapy, and characterised by the use of natural radon-rich mineral water for treatment of pain and mobility disorders. Detailed study of life in these two communities was carried out in order to reveal potential similarities and differences in the way the therapy is applied and experienced by the users. Analysis of the data obtained will try to shed new light on the behaviour and experience of the users of Balneotherapy in specific cultural contexts.

Becoming ill is a social process which includes not only physical unwellness but also recognition of the condition by others, and a consequent adjustment of patterns of both behaviour and expectations. All societies and cultures have developed

mechanisms and structures that deal with the fundamental questions of health, illness, therapy, treatment and healing. Study of the social and cultural dimensions of the meaning and experience of illness is undertaken by several disciplines ranging from biological sciences and clinical medical practices, to behavioural and social sciences. Medical anthropology, with its broad mandate of trying to understand both the causes and consequences of human sickness, focuses on the manner in which all knowledge that relates to questions of the body, health and illness is culturally constructed and then continually further negotiated and renegotiated in a dynamic process through time and space (Lock and Scheper-Hughes, 1996). In trying to make sense of illness medical anthropology rather than seeing it as something a patient “has” views illness as something a patient experiences. It therefore concentrates not just on the biological and physical aspects of human health and healthcare but also on the sociocultural aspects that are concerned with medical practices, beliefs and knowledge placed within the context of culture thus reflecting our beings as social products (Foster, 1978).

The study, based on ethnographic fieldwork, uses the methodology of a mixture of interviews with selected, mainly elderly, informants, and participant observation. While trying to construct a view of how members of different populations think about health, illness, and healing in cultural terms, and how they act during periods of illness I worked as an anthropological researcher in spa hospitals in two cultures. The initial fieldwork was located in Japan and that was followed by ethnographic work in the Czech Republic. Language played an important role in my choice of the second site. Out of the few European spa locations (Austrian, Czech or German) that were characterized by using radon-rich water I chose a spa in the Czech Republic because it allowed me to use my native Czech language in the course of the research. I have a working knowledge of Japanese which, in combination with English, I could use in Japan. These

language abilities enabled me to engage with the patients and obtain data on their experience of spa medicine in these two diverse cultures.

Balneotherapy is integrated into the structures of medical systems of many culturally diverse countries that nevertheless show similarities in their health care (Kleinman, 1980). These systems are made up of family- or self-administered treatment, folk or traditional healers, and professionals formally-trained in government-sponsored schools, all of which exist in a fluid environment where these sections are able to overlap. We can detect this overlap in the practice of Balneotherapy. The popular sector is still very much in evidence and is commonly the first one many people call on when looking for advice during an illness episode. It is usually based on knowledge and support provided by families or by friends. The professional sector is represented by trained medical professionals or balneologists who have obtained medical training in various medical schools where Western-style biomedicine, or cosmopolitan medicine, is usually accepted and taught as the official dominant medical system. Those who wish to practice as balneotherapists need to enhance their medical expertise by taking extra courses in Balneology. Based on Western epistemology this 'scientific' medicine which was produced over the course of the entire nineteenth and twentieth centuries regards medical knowledge about the body, behaviour, health and disease as a system in which an illness can be reduced to a purely scientific problem. This knowledge is viewed as a matter of measurable parameters, as something 'universal, absolute and objective rather than something concerning an individual' (Bivins, 2007) or, expressed differently, as a science of tests and measurements or system of technologies (Leslie and Young, 1992). This dominant sector of the health care system further overlaps with knowledge that exists within other medical sectors e.g. chiropractice or osteopathy, or sectors of contemporary Asian systems e.g. Āyurveda, Unani or Chinese medicine e.g.

the use of acupuncture and moxibustion¹. In Japan the Japanese version of Chinese medicine, *kanpō* medicine, continues to be used in parallel with cosmopolitan medicine (Bray, 1993).

Medical systems, in common with other cultural systems, are permeable to exogenous influences but have a social presence which reflects the cultural characteristics of each country where they are practiced. It is usually possible to find links among many medical traditions. Studies have been done on several medical techniques, e.g. *Naikan* therapy, Morita therapy and moxibustion as used in Japan and China. Lock has worked on the practice of moxibustion (Lock, 1978), Ozawa-de Silva studied *Naikan*, a form of psychotherapy based on self-reflection (Ozawa-de Silva, 2006), and work has been done on Morita therapy, a purpose-centered, response oriented therapy (Gielen *et al.*, 2004). The first of these therapies has its origins in China from where it arrived in Japan via Korea, but the other two are of a purely Japanese origin. All of these are now commonly used in Western Europe and North America (Leslie and Young, 1992). I am focusing on Balneotherapy which has travelled in the opposite direction. From its Greco-Roman origins it was transported to Japan during the nineteenth century and it can thus be best understood within the historical context of its origins.

1.1 The aims of the study

Medical anthropology focuses on the way in which all knowledge relating to the body, health and illness is considered to be a cultural product. The aims of this work were to make a valid contribution to the existing body of this knowledge by focusing on specific medical practices within the Japanese and Czech medical cultural systems. Within the broad category of medicine this study will consider the system of meanings, or symbolic forms used to construct and interpret personal experience of chronic illness. This will be done with specific reference to Balneotherapy which this study will use as a

¹ Traditional Chinese medicine technique used to facilitate healing which involves the burning of mugwort, a small, spongy herb.

tool helping it to uncover the culture-bound concepts contained within the two local systems of medicine and to discover how they affect the patient experience of illness and influence the results of the treatment applied. The study will place the therapy in the context of two culturally diverse medical systems, one of Japan and one of the Czech Republic, where this technique represents a popular form of healing.

The purpose of the thesis was not to evaluate the efficacy of the treatment or to assess whether this is the best way of relieving pain. It was rather to try to uncover what the factors that affect the patient experience are, and then use these to demonstrate how these are culturally determined.

1.2 Terminology

Before proceeding further, I need to define several terms that will be used throughout the text. A substantial body of research in medical anthropology stems from the perspective of European and American scientifically based medicine (Bivins, 2007; Waldstein and Adams, 2006) often referred to as “Western”, “modern” or “scientific” medicine. In their Introduction to ‘Paths to Asian Medical Knowledge’, Leslie and Young reject the use of these terms and propose the use of the term “cosmopolitan medicine”. They consider it to be a more precise term for describing the dominant medical system that represents the principal methods used in the healthcare of industrial societies such as those of the two countries selected for this research (Leslie and Young, 1992). They rejected the term “Western” because biomedicine is international, and the term “scientific” because much of clinical medicine includes intuition and judgement that, although clearly medical, cannot be labelled as science. The term “modern” was rejected on the grounds of the historical development of western biomedicine which shows that, in common with all medical systems, it constantly incorporates changes and/or rejects its own ideas over the course of time.

The Cartesian legacy of separation of mind and body can be found in the way medical anthropology makes a distinction between illness and disease which was first introduced by Eisenberg and Kleinman (Eisenberg, 1977; Kleinman, 1980). While the term 'disease' usually refers to the pathological or medical aspect of a health problem, or to a category that is defined in Western biomedical terms (Ohnuki-Tierney, 1998), 'illness' is generally seen as the subjective experience, a combination of culturally defined feelings and perceptions of ailments often seen as socially devalued states (Kleinman, 1980; McElroy and Jezewski, 2000; Pelto and H. Pelto, 1996). Medical practices are typically culturally specific and intellectually coherent within a culture, and not all cultures consider certain conditions as indicating the same degree of health or illness. What is seen as illness in one culture may not be considered as such in another culture (Loustaunau and Sobo, 1997). Fabrega sees the cultural experience that is 'illness' as one in which those taking part, the actors, behave in a particular way that is rooted within a specific medical setting and that is governed by specific cultural rules (Fabrega, 1974). This would mean that during the personal experience of being ill, as recognized by the specific society a person lives in, the manifestation of ill health is person-oriented (Lewis, 1976; Lock, 1987).

Balneotherapy forms an integral part of this complex. It does not emphasize tests and measurements that are taken to what Lock called "the detriment of concern for the human experience of illness" but stresses the subjective experience (Lock, 1980). Lock argues that many modern medical practices are more concerned with the management of disease rather than with its experience. Although usually successful when dealing with acute medical problems, biomedicine's inability to deal with chronic illnesses may be one of the factors affecting the increased interest in the use of alternative medical strategies (Charmaz, 2000; Klieber, 1993; Lyng, 2010).

Chronic illnesses affect mainly the elderly. Many industrial societies are currently experiencing a shift in their demographic profile towards a greater percentage of the elderly. In a detailed study, Keyfitz and Flieger (Keyfitz and Flieger, 1990) used data obtained from National Statistical Agencies of 152 countries to show that in all of the old and established nations (including all the European Union countries, North America and Japan) from the late twentieth century onwards the proportion of the elderly is increasing relative to the young. They suggest that this is due to the combination of the post war baby boom and the subsequent decline in the birth rate. This changing demographic profile has many political and economic implications but the one that interests us here is its effect on the provision of medical care. These countries are finding that they are having to allocate ever growing resources to the treatment of chronic and degenerative diseases which follow in the wake of this demographic change and which are characterised by long-term morbidity and often pain (Larsen and Lubkin, 2009). Sufferers, as well as many of the medical professionals, are therefore increasingly seeking alternatives for the management of the body in long-term, chronic illnesses. Balneotherapy is one of these alternatives characterized by a much more holistic approach to medicine i.e. by a shift away from cosmopolitan medicine and restoration of lost health, towards the restoration of internal balance and attempts at maintenance of health (Lock, 1980). It is a popular healing technique with a long history that attempts to improve health using a holistic approach. Like many therapies, it has survived until today because of its ability to adapt and to co-exist within the pluralistic and ever changing and developing medical systems.

1.3 Balneotherapy

Balneotherapy can be defined as a treatment of disease and a method of healing that uses bathing. It is practiced in spas ², where natural mineral springs, and sometimes gases and hot mud, are found (Dvorjetski, 2007; Křížek, 2002). The therapy has a

² Place with a medicinal or mineral spring.

cluster of effects on the body that combine to induce both physiological and emotional changes. These include increased mobility, lowering of blood pressure, reduction of inflammatory processes and stimulation of the immune system as well as reduction of stress and a feeling of well-being. The combined effect of all of these changes is hopefully seen in the reduction of pain and improved quality of life.

This study investigated two basic procedural methods, both of which involved immersion in natural mineral spring water. The first uses a pool and the second uses individual baths filled with the natural spring water. Although natural springs exist all over the world Balneotherapy as a healing technique is only offered by some countries. These include the two countries considered here, Japan and the Czech Republic where the role of spa medicine in pain relief has long been recognized by the medical profession. Based on medical referrals their citizens have free access to what in both countries is a very popular type of medical care. Use of this technique is not restricted for treatment of one type of pain relief and can be used in cases of osteoarthritis (Fioravanti *et al.*, 2011), arthritis (Horvath *et al.*, 2012), low-back pain (Constant *et al.*, 1995; Pittler *et al.*, 2006) and many other painful, mainly chronic, problems. Patients suffering from urinary and digestive tracts disorders, joint pains or diseases of the skin, as well as respiratory illnesses and circulation problems, fatigue and headaches have been helped by taking 'the waters' (Ashe, 1950; Burachovič and Wieser, 2001; Dvorjetski, 2001-2002; Křížek, 2002). Women experiencing gynaecological disorders or suffering from infertility have used mineral springs (Burachovič and Wieser, 2001; Neale, 1981), the use of which was also recommended for treatment of venereal diseases (Dvorjetski, 2001-2002; Rousseau, 1982). Despite this, doubts remain about several aspects of the use of spa therapy. Balneotherapy most often does not result in a 'cure' or have a long-term effect. Waldram, in his review of the current methodological and theoretical issues concerning the efficacy of traditional medicine

(Waldram, 2000) quotes Nichter who suggests that it simply 'contributes to healing, i.e. it results in a positive qualitative change in the condition of the afflicted' (Nichter, 1992,p.226). Although, according to its users, treatment based on mineral spring water may be effective, in the absence of measurable parameters it is hard to evaluate its success. A literature search revealed only one reference to a cure that resulted from application of hot water immersion. In the late eighteenth century, of the thousands of patients suffering from paralysis resulting from chronic exposure to lead who were admitted to Bath hospital, 44% were discharged as cured.

For Balneotherapy to maintain its presence within the medical services of any country its position as a healing method needs to be supported at several levels. At the top level, support necessitates the involvement of the medical policy-makers responsible for creating an appropriate medical climate within which the therapy can flourish. This calls for financial backing for this type of treatment, and for the provision of appropriate medical training opportunities as well as suitable medical facilities e.g. in hospitals that specialize in Balneotherapy. The second level is represented by the professionals that put the therapy into operation. These are the balneotherapists or medical practitioners who have taken the specialist courses and exams that allow them to work in spa medicine. Their medical training provides them with the knowledge of not just the physiological side of the treatment but also teaches them how to deal with their chronically ill, mainly elderly, patients. This second aspect of their training is important because, as we will see later on, the psychological impact of the doctor-patient interaction can affect the healing process and consequently the outcome of the therapy. Finally, there are the users, i.e. the patients who, although they represent the lowest level of influence, are actively involved in the success of the therapy and its reception and integration into the medical culture of the two countries. The users' active co-operation with the therapy, their attitude towards it and their beliefs in how

they will be affected by it, combine to produce the desired outcome which in the case of Balneotherapy is most commonly the loss of chronic pain. This many-layered support can be found in both cultures considered here. Both provide specialized medical training and hospitals specializing in spa therapy. Financial backing is also demonstrated by the fact that the treatment is covered by medical insurance.

The continuing popularity of Balneotherapy would suggest that it is effective in what it sets out to do i.e. in relieving pain. Its effectiveness is however questioned by many people working in this field. Although most of those treated by the therapy report positive results, many reviews show doubts as to the value of the findings. Firstly, as mentioned already, using Balneotherapy does not constitute a 'cure'. Most of the disorders treated are chronic and usually non-curable, which means that many of the patients have to return to undergo repeated periods of therapy. Some studies have found no evidence of difference between using Balneotherapy (and therefore natural spring water) and using placebo i.e. bathing in warm ordinary tap water (Jacobs *et al.*, 1991). Among those who support the view that Balneotherapy has a real impact on pain relief, on reduced intake of drug consumption and on improved quality of life, especially in the elderly, are Fioravanti (Fioravanti *et al.*, 2003), Constant (Constant *et al.*, 1995) and Klieber (Klieber, 1993) to quote just a few. There is however a large volume of work that expresses doubt as to the validity of these views. Several reviewers who are critical of many of the studies point to the many flaws in methodology as well as lack of consistency in both the collection and the analysis of the data. These include the Dutch group led by Verhagen (Verhagen *et al.*, 2008; Verhagen *et al.*, 1997), a group of scientists working in Oxford (Pittler *et al.*, 2006), and a group of Japanese balneologists working in several Japanese spa-based research institutes (Kamioka *et al.*, 2010).

Even if the effect of Balneotherapy cannot be narrowly expressed by changes in measurable physiological parameters, this technique is popular with patients looking for relief from chronic pain who are undertaking it in the hope of improving their health. They trust that the combination of interventions by medical specialists with their own beliefs in the healing power of the natural mineral spring waters and other cultural beliefs associated with ideas about health and illness will bring about the desired change in their health status.

1.4 Development of Japanese medicine

Japan's medical history goes back millennia. Although Shintō priests did not act as doctors, they were able to take part in healing ceremonies where they acted as intermediaries with the gods (Floyd, 1965). Gradually Chinese medical ideas entered Japan with the mass importation of Buddhism and culture from China in the 7th Century. Medicine also came under a Confucian influence³ which, among other concepts, advocated man's own responsibility to keep healthy (Lock, 1980). The new ideas included the use of herbal medicine, acupuncture⁴, moxibustion and massage as healing agents. The body was imagined to be a microcosm of the universe, and medical interventions were directed toward the correct circulation of '*qi*' which was essential for the maintenance of healthy balance between the different organs (Needham, 1956). But the difficulties in obtaining the large quantities of Chinese herbs needed in the practice of this type of medicine led in the late 17th century to the emergence of *kanpō* or a characteristically Japanese system of healing based on Chinese medicine but focused on the use of the much more freely available Japanese herbs (Lock, 1987). All of these traditional medical systems were founded on beliefs that were dominant among educated Chinese, Japanese and Koreans and offered a holistic model of

³ Confucius (551-479 BC) Chinese teacher and philosopher. His thoughts developed into a system known as Confucianism.

⁴ Treatment using thin, solid needles that are inserted into specific points in the skin. Stimulating these points is applied in order to correct imbalances in the flow of *qi* through channels known as meridians.

medicine where the meaning of illness and the maintenance of as well as the restoration of balance in the body was assigned equal importance to the naming and removal of a specific disease (Lock, 1980). However, as only the higher classes had access to doctors using the more expensive Chinese herbs and practices, the majority of the population used practitioners of *kanpō*, or the home-grown system of medicine. *Kanpō* soon started coming under the influence of Western medicine that entered Japan with the Dutch who were allowed to practice on the island of Deshima in Nagasaki (Hall, 1988). The Dutch introduced the Japanese doctors to a new view of anatomy in which the internal organs were argued to be related to function rather than the entire universe (Hall, 1988). Following the Meiji restoration in 1868⁵ the pre-existing medical systems were put under pressure to change because they were seen as not being 'modern' enough. Western biomedicine became the norm although the ethnomedical systems, like *kanpō*, were not driven out (Lock, 1980; Ozawa-de Silva, 2006). The current medical care system in Japan exists as a mixed structure, that contains elements of many different sets of ideas concerning health which it unites into a complex pluralistic system of medicine.

Reasons that lie behind many aspects of behaviour concerning ill health can be found in society's ideas about illness. Western medical ideas which have been dominated by the influence of the Cartesian legacy of the separation of mind and body, first proposed by René Descartes⁶ in the seventeenth century, have gained orthodoxy in the twentieth century. This dichotomy of the mind and the body seen as two distinct substances divorced from each other places illness as residing in either body or mind. In contrast, many of the ethno-medical systems do not separate the body from the mind, which means that illness cannot be situated in either of these alone (Lock and Scheper-Hughes, 1996). It needs to be noted that the mind-body problem is still a

⁵ Restoration of the imperial rule following nearly three hundred years of rule by the Tokugawa shogunate.

⁶ French philosopher René Descartes (1596-1650) closely associated with the idea of mind-body dualism.

subject of on-going discussions in philosophy with no definite answers to the questions 'what is the relation between the mind and the body' and 'what is the place of the mind in the physical world'? (Crane and Patterson, 2000) .

In Japan, where the concepts of illness and health are also rooted in the relationship of body and mind, illness is seen as disharmony or disturbance of a balanced state. At the same time illness and health are subject to ideas about the '*qi*', or vital energy, and about purity and pollution. The Japanese understanding of the mind-body relationship is that the two are essentially a single entity which means that pathological condition in one will produce pathological symptoms in the other (Ozawa-de Silva, 2006). Use of medication as well as application of therapies like moxibustion, acupuncture or Balneotherapy can therefore result in the improvement of either physiological or psychological conditions (Lock, 1978). The central concept of a balanced '*qi*', or fluid substance connecting the different parts of the organism, is essential for the maintenance of healthy equilibrium in the body. Its free circulation is susceptible to many physical and mental disturbances and if an imbalance of the flow of one's '*qi*' were to appear, caused for example by illness or bad habits, the body needs to be rebalanced or the '*qi*' to be positively directed to regain one's health (Bivins, 2007; Ozawa-de Silva, 2006). The concept of '*qi*' also contains within it the idea of the one-entity mind and body. We can see that in the commonly quoted Japanese saying '*byōki wa ki kara*' which means 'illness comes from the soul/mind' ('*ki*' is the Japanese transcription of the Chinese '*qi*').

Most importantly, however, illness in Japan is based on different epistemology. It is not due to a pathogen but seen as a form of pollution that results from coming into contact with any one of the potentially polluting agents. The ideas of pollution and purity are deeply embedded in Shintō ('the way of the Gods'), the indigenous folk religion of Japan, a conglomerate of primitive beliefs in mysterious forces inherent in nature

(Befu, 1971). In the Shintō order of things, certain situations or circumstances like death, injury, disease, menstrual blood or childbirth are regarded as polluting agents or *tsumi* (impurity) (Breen and Teeuwen, 2010; Hendry, 1995a; Ono, 1962). As, according to Blacker, becoming polluted is one of "the unavoidable concomitants of the human cycle of life" (Blacker, 1975) appropriate actions need to be taken to remove the encountered pollution. These actions are of three kinds. First of all, agents believed to be polluting should be avoided as far as possible. Secondly, all actions of prevention should be encouraged, and thirdly, if pollution cannot be avoided then some sort of purification ritual has to be performed. An elaborate system of purification rituals that eradicate the impure open the way to regeneration and return a person to the state of harmony exist as an intrinsic aspect of Shintō (Reader, 1991). The main rituals in Shintō are built around the concepts of impurity and its removal by *oharai* (purification) using one of several purification methods and agents (Clark, 1994; Holtom, 1995; Ohnuki-Tierney, 1998; Ono, 1962). One of these agents is water, which is why Shintō shrines were often located near some form of moving water e.g. river or the sea (Breen and Teeuwen, 2010). Already the earliest known collections of Japanese legends and myths -- the *Kōjiki* (The Chronicle of Ancient Matters) written in the early 8th Century -- indicated a belief in ritual cleansing using water or *misogi*, and stressed the importance of daily water ablutions which was rooted in the beliefs that water has the power to wash away impurities as well as physical dirt (Ohnuki-Tierney, 1998). Disease is one of many types of pollution and could be seen as a result of retribution sent by the Gods for man's misdemeanours, or as a result of coming into contact with one of the polluting agents. The aim of any treatment was to drive out the offending polluting material which could be done using herbal infusions or hot spring baths, the principal forms of therapy designed to act as purgatives (Lock, 1978).

1.5 Water and healing in Europe

In Europe, natural mineral springs have for centuries been used in medicine in two very different types of cure i.e. the 'drinking' or the 'bathing' cure, where "cure" is used in the German technical sense of "kur" or "treatment". In the former type of cure the characteristic mineral content of each spring dictated its specific use for specific illnesses. The list of claimed benefits is long and covers treatment of stomach or liver, kidneys, circulatory disorders or skin diseases, and many more. In their quest for improved health, patients used to be directed to drink excessive quantities of specific 'healing' springs (Browne, 1990; Křížek, 2002; McVaugh, 1993; Porter, 1990). Although the drinking method no longer advocates an intake of extreme amounts of mineral water, it is still used in many, mainly European, spas for treatment of a variety of disorders (Thomson, 1978).

The latter approach to health and healing based on the use of water uses the 'bathing' cure. This consists of total body immersion in mineral spring waters and utilizes not only the mineral content but also other physical properties of the water e.g. the presence of various gases, the temperature and the buoyancy all of which can be actively involved in the healing process.

Some of these specific properties of the spring waters have been linked to healing specific disorders. For example bathing in springs with high sulphur content helps those suffering from various skin complaints (Reid, 1929). The presence of radon gas is another, although controversial, example of specific use of springs in healing.

Supporters of this use claim that radon plays a crucial role in reducing the pain that accompanies inflammatory diseases of the joints (Calabrese and Baldwin, 1998; Catelino, 2006; Franke *et al.*, 2000). Although the mechanism of the process is far from well understood, and is the subject of significant on-going controversy, thousands of sufferers use this cure annually in many spas both in Europe and in Japan.

Beliefs in the healing properties of water in Europe go back millennia. There is both archaeological and written evidence that healing springs were used by Greek and Roman physicians to maintain the body's correct humoral balance which was considered to be the basis of good health (Bynum and Porter, 1993). The principal therapies of ancient medicine were primarily preventative, and from the beginning included the systematic use of thermo-mineral waters (Yegül, 1992). A survey of literature on the history of medicine reveals that the ancient physicians had very few effective treatments at their disposal. As their livelihoods depended on the support of their mainly wealthy patients, i.e. the only people who could afford a doctor, it was in their interest to prescribe treatment that was relatively pleasant or at least would not harm the patient (Porter, 1990). Bathing in natural springs, especially those considered 'healing' springs, was one of the harmless ways of maintaining a balanced or healthy body.

Greco-Roman medicine used empirical knowledge of effective procedures and combined it with beliefs in magical influences (Waldstein and Adams, 2006; Yegül, 1992). The Greek God Asclepius (130-91BC) was one of the many deities associated with health, as were his two daughters Hygeia (Health) and Panacea (Cure All) (Yegül, 1992). The images of all three deities could be found in ancient Greece and later Rome in places that were dedicated to bathing where people came looking for cures and healing (Dvorjetski, 2007). Hippocrates of Cos (460-370BC), considered to be the father of modern European medicine, also strongly believed in bathing as means to sustaining healthy balance between mind and body. He also maintained that the patient's will to heal plays an essential role in the maintenance of health, and was the first to suggest that it is the duty of the patient, helped by the physician, to oppose illness and to co-operate with and believe in the treatment offered (Lloyd, 1970). His ideas influenced the practice of medicine for millennia to come.

1.6 Choice of research topic

My interest in the topic followed from the work presented in my MA dissertation entitled “The Cultural Symbolism of a Community Bath (*kyōdōburo*) in Misasa Onsen (Japan)” (Fraser, 2004). In it I examined the role of a community bath in the social life of a small Japanese rural community in the spa village of Misasa Onsen. While living in the village I had to spend some time as a patient in one of the two local hospitals. This gave me a great opportunity to experience Japanese medical services both as a user and as an active participant observer, and made me curious about the second use of the local springs i.e. in pain-relieving therapy which led me to start this current enquiry.

My personal background further contributed to my interest in conducting an anthropological study in a medical setting. I had to recognize that my background gave me a strong bias towards Western biomedicine, one that at first I found very difficult to overcome. I come from a medical family and I studied physiology for my first degree. My father, a paediatric surgeon who spent his life dealing with acute medical problems, had no interest in, or indeed patience with, chronic conditions or beliefs in alternative medical treatment. The closest we, as a family, came to experiencing spa culture, was from anecdotal hearsay evidence of their efficacy. One such example comes from the west Bohemian spa of Františkovy Lázně, the waters of which were said to be able to cure infertility problems. The reported high degree of success may also have been related to the significant number of army personnel stationed just outside the spa town. Nevertheless, the Czech Republic, my country of origin, is rich in mineral springs and has a long history of spa use and spa therapy. Although I personally had no experience of staying in a spa I was aware that the country’s numerous spas are very popular, and that spa therapy is widely used for the treatment of a variety of chronic complaints. Spas here are also almost automatically medically prescribed to patients for recuperation following any major operation.

The two locations selected to study the complex interactions involved in the ethnomedical system of Balneotherapy were chosen for their physical, historical and medical similarities. Both are classified as spas and are characterised by the presence of natural mineral springs with similar characteristics. These have been responsible for the rise of medical establishments specializing in the treatment of similar types of disorders. Both spas have similar geography and share certain historical links relating to their medical practices. The physical similarities are based on the underlying geology. The historical and medical similarities can be traced to the origins of the theory of this therapy which goes back to ancient Greece from where it was conveyed to Rome. Roman military expansion carried with it the Roman love of baths and helped to spread Balneotherapy throughout Europe (Burachovič and Wieser, 2001; Bynum and Porter, 1993; Rolls, 1988). The Czech Republic has a long history of spa medicine which was introduced into the country via German-educated physicians (Křížek, 2002; Kumpera, 2004). The origins of the theory of the current practice of Balneotherapy in Japan can also be traced back to Rome. It also arrived via a similar route to that in the Czech Republic i.e. it was brought to Japan in the 19th Century by German-educated physicians (Bowers, 1970).

1.7 Research framework

This research focuses on medical systems that bring together ideas about illness and health in specific, i.e. Japanese and Czech, cultural contexts. Medical systems can be regarded as special types of cultural systems in the same sense as kinship or religion are thought of as types of cultural systems. As such they meet Geertz's criteria of a cultural system, both as a map 'for' and a map 'of' a special area of human behaviour (Geertz, 1973). Within the scope of this research this map helps users of a specific therapy, Balneotherapy, to navigate within their system of cultural belief (one Japanese and one Czech), towards the improvement and or maintenance of health. We

will look at how this navigation assists patients during an illness episode and how it helps to steer their behaviour through it.

To gain an insight into the cultural world of illness and healing I spent time working in two spa hospitals and used the ethnographic methods of participant observation, together with interviews and informal conversations. Before starting this fieldwork I read widely on the historical and medical background to Balneotherapy and on the current anthropological theories of medical systems.

1.7.1 Experiencing an illness episode in a spa

The life of a patient in a spa is subject to a myriad of influences all of which will to various degrees affect the patient behaviour and experience. The physical location of the spas in remote mountainous areas means that most patients have had to take a long journey from home. They leave behind their families and communities with whom they share values and norms of behaviour, and they enter the communities of the medical establishment where they will be treated for a period of several weeks. The extent to which they become incorporated into these communities may influence their illness experience. While undergoing spa therapy patients are not acting alone but are involved in a social activity taking place within a social context of considerable complexity within a new social group (Bury, 1997). While studying the Ndembu tribe of Zambia's healing practices Turner already suggested that as illness is a type of social activity it follows that healing represents a type of social support (Turner, 1964).

The illness experience is also subject to how patients behave within the freedom that they have acquired as a result of this physical separation. As they leave behind not just families but also their duties and obligations, perhaps they feel free to engage in other activities not usually available to them. In anthropological terms this type of situation has been associated with Turnerian idea of 'liminoid' space in the arena of leisure

(Turner, 1983). Derived from van Gennep's idea of a liminal or 'in between' phase it is a time when an individual is disconnected from their current social position (Gennep, 1960) and expected, or allowed, to show behaviour that is different from the norm. This opens up opportunities to engage in new, perhaps more creative, types of activity. Some of these activities fit well within Huizinga's concept of 'play' as 'a voluntary activity different from ordinary life' (Huizinga, 1949), but also with ideas of its including elements of seriousness and effort (Rodriguez del Alisal, 2002) . The level of engagement with these out-of-the-norm activities, and therefore the degree of effect they have on the healing process, however, may be influenced by the differences in the availability of social activities in the two spas.

The degree of patient cooperation with authority represented here by the management of the spas and the physicians is another potentially influential factor, as is the doctor-patient and patient-patient interaction. The hospital management has control over the provision of the various medical interventions, the patients' eating and sleeping arrangements and over the rules governing the freedom of patients' movement outside the hospital boundaries. All of these structures impose restrictions on the life of the patients and may have direct effects on their feelings and thus on their illness experience.

The therapy is made up of many procedures all which are explained to the patients by the physicians. The high levels of trust patients have in their doctors may be reflected in the degree of patient cooperation with the quite demanding regime this therapy imposes on them. They may therefore 'work' harder at trying to achieve their aim, i.e. improvement of their state of health.

The most important part of the experience of the healing process is however played by the culturally rooted expectations and beliefs that patients hold about the therapy. In Japan, where spiritual associations with water and its role in the purification of pollution are deeply embedded in the Japanese religion of Shintō (Clark, 1994; Lock, 1978), medical interactions based on water are likely to be accompanied by expectations of success.

Finally we need to understand what the aim of the healing is considered to be. Is the aim of the therapy the achievement of 'perfect' health or is it the restoration of a balanced state of body and mind? There is no clear-cut definition of 'health'. Ozawa-de Silva (2006) suggests that it is far too simplistic to consider health simply to be an absence of illness. The current lack of methods that would allow evaluation of how 'healthy' (rather than how 'ill') people are makes it difficult to evaluate the degree of success of complex medical therapies. It therefore relies on data from sociological studies and, more recently, from substantial medical anthropological studies. In most industrialized societies, which include the two societies studied here, active responses to illness, pain and distress are dominated by the biological sciences. In their terms a successful outcome is understood as the elimination of a disease or a disorder or, as Parson called it, the termination of the "sick role" (Parsons, 1951). Spa therapy does not usually result in a termination of a problem but most commonly in an incremental improvement. That means that we can only guess at the extent of the success of Balneotherapy from what the patients tell us (Ozawa-de Silva, 2006; Scott, 2010). The category 'outcome' is thus affected by the many cultural factors and opinions a patient holds about the results. These opinions are subject to culturally constructed expectations, judgments and commitments the meanings of which are acquired during childhood acculturation into a society and during familiarization with the conventions of a particular culture (Needham, 1972). Kleinman emphasizes the methodological

problems. He found that there are in fact known instances when patients claim satisfaction despite their symptoms persisting (Kleinman, 1980). In the specific case of the two spas for the many chronic illnesses that are being treated there is no cure. It means that even if there is a reported improvement or a positive change in the condition of the patients it is not long-lasting, and the treatment usually has to be repeated (Csordas and Kleinman, 1996).

1.7.2 Locations and participants

The thesis is based on data accumulated during two separate periods of fieldwork carried out in each of two locations both of which practice Balneotherapy carried out by medical specialists, or balneotherapists. As the work followed from my previous research the primary site was Misasa Onsen in Japan and the site chosen for cross-cultural comparison was Jáchymov Spa in the Czech Republic. The use of medicinal spas is in both countries free to all members of society provided it has been recommended by their medical practitioners. If there is cost involved it is low in both cases. In Japan there is an age-dependent sliding scale of payments in which the older the patient is the less he or she contributes towards the cost of treatment. In the Czech Republic the basic therapy (three weeks in shared accommodation) has until now been met in its entirety by the state-run Health Insurance system. Both of these financial arrangements are subject to political and economic changes which, in recent history, have resulted in a rise of the personal contribution portions of the total costs. Despite these increases, spa therapy forms an extremely popular sector of state medical services in both countries.

Those taking part in the research, i.e. the spa patients, were generally the elderly who were using this complementary or alternative therapy in their quest for the relief of chronic pain. This pain is usually controlled by a daily intake of medicines some of

which have well-known negative side effects. That is why sufferers look for alternatives of which Balneotherapy is one (Chang *et al.*, 2005; Gûnaydin, 1996).

1.8 Research Questions

The thesis follows several separate strands of enquiry which I hoped would converge to make a contribution towards our understanding of health and illness and their interaction with culture. The opening topics will provide background information to a range of related issues. As there is a historical connection between the two locations related to the practice of Balneotherapy I first of all tried to summarize the very large body of knowledge available on the historical origins of the practice of Balneotherapy and its involvement in healing, both in Europe and in Japan. The second strand of enquiry follows both the general and the specific use of mineral spring water in therapy. By specific is meant the special cases where certain mineral springs are considered to have special properties e.g. temperature or the presence of certain minerals or gases, which makes them suitable for treatment of specific disorders. In the case of Misasa and Jáchymov the characteristic, and seemingly essential, healing property of the springs is their raised level of radon gas. The mechanism behind the potential role of this gas in pain relief is not well understood and is subject to a considerable and on-going controversy. As patients may, through the media, have access to some of this conflicting information their attitude or beliefs in the therapy may be affected. To explain the background to the uncertainty that exists within the medical profession concerning the exact mechanism of the effect of radon on the body both of the current theories of its effect, i.e. theory of hormesis⁷ and the Linear-No-Threshold theory, will be outlined.

⁷ Coming from the Greek verb “to excite” radiation hormesis involves non-linear, biphasic adaptive dose response to a small dose of toxin. Living organisms function in a dynamic equilibrium state called homeostasis which is perturbed by an introduction of a toxin. This causes stress (and damage) to the organism which in turn causes it to respond adaptively by stimulating the organism’s protective responses against this stress.

The therapeutic process itself, and the two participating sides it involves i.e. the patients and the practitioners, form the next topic. Both have been acculturated within their own medical system and are subject to culturally acquired knowledge. In addition, the medical practitioners have been subject not only to the general cultural setting but also to specific medical training, again within their specific culture. Csordas' and Kleinman's work on active response to illness and the three common elements of healing i.e. diagnosis, treatment and outcome (Csordas and Kleinman, 1996) suggest that the training elements are themselves subject to cultural differences. These differences will be reflected in the diagnosis, that is what is seen as a problem, and in the decision taken about what therapy will be used to deal with it. This is the 'who does what to whom' part of the process i.e. the medical procedures or actions taken i.e. operations, techniques or medicines administered that it concerns (Sargent and M.Johnson, 1996).

While it is relatively easy to identify the first two parts of the process, the diagnosis and the type of treatment, the outcome is hard to establish. This is partly due to the absence of a proper evaluation method of *how healthy* people are which is lagging behind the many methods available to defining *how ill* they are (Ozawa-de Silva, 2006). Our knowledge of what represents successful outcome of many types of therapy is essentially based on the patients' reports, and are subject to many cultural constructs and beliefs that will be discussed as the next topic.

The final two topics gradually emerged from the patients' narratives. The first came from interviews conducted with Misasa patients, and covers the Japanese concepts of *tōji* (water-based healing), *shizen* (nature) and *furusato* (the idealized native place, the "heart" of Japan). These are the elements that were singled out by the Japanese patients as making a significant contribution to their attaining the goal of the therapy, that is pain relief. The last subject, the one of play, initially also emerged from the

narratives, this time those of the Czech patients. It deals with aspects of 'play' as introduced in the works of Huizinga (1949), Turner (1983), Hendry, Linhart and others (Huizinga, 1949; Raveri, 2002; Turner, 1983), i.e. play as a state of mind, attitude or a disposition. While also being enthusiastic about the beautiful mountainous setting of the spa, the clean air and the general atmosphere of peace, the Czech patients, in contrast to the Japanese cohort, did not assign a key role in the success of the therapy to these natural elements. Their narratives stressed a very different ingredient, one they saw as a much more significant component of success - the social life of the spa. Most of these patients looked forward to taking part in this activity prior to coming and most also engaged actively in it while undertaking the therapy. Jáchymov, in common with most European spas, offers various possibilities of social life although, being a relatively small spa, this happens in a somewhat limited way (Wechsberg, 1979). This social space allowed patients to 'step out of real life' (Bateson, 1983) and to negate some of the rules or understandings that apply in the on-going daily life (Huizinga, 1949). Further augmentation of this space by spatial separation of the location and by moving away from usual responsibilities also enhanced the sense of enjoyment.

The two spas we are dealing with provide a separate cultural space which the patients inhabit for the duration of their treatment. The physical, psychological, and institutional situation was reminiscent of Thomas Mann's "Der Zauberberg" (Mann, 1927). It allowed what his hero Hans Castorp called "the world below" to be removed from one's consciousness. This setting thus provided the perfect environment for Turner's ideas of 'liminoid' space which allows different types of behaviour from the one normally shown outside this space (Turner, 1983).

These four themes provide a framework for the research questions. First of all I will give a summary of background material that is available on these themes in order to answer the following questions:

- a) How and why is Balneotherapy employed in healing?
- b) Why does this therapy continue to be used at all given that it does not eliminate the mainly chronic and incurable disorders which will in most cases recur?, and
- c) Do the physicians work within similar paradigms or are their values unique, that is isolated from each other?

The next group of questions focuses on the users of Balneotherapy i.e. the patients. Given the many physical, historical and procedural characteristics of the two spas I shall enquire how their similarities and differences translate into the constructed experience of those who use the therapy. What social and cultural factors come into play when patients are constructing their total spa experience and what are the mechanisms that enable them to contribute to it?

The notion of outcome will be touched upon next. In the absence of measurable parameters how do we evaluate the success, or otherwise, of the particular spa therapy in question? And what are the culturally constructed ideas that contribute to the outcome?

1.9 Thesis Outline

The thesis starts with a description of the methodology used in obtaining data including any methodological differences between the two field locations, and the reasons for them. Chapter 3 aims to provide the background to many of the themes mentioned above. These cover the history of Balneotherapy and the development of medical theories connected with it with special reference to European and Japanese practices of spa therapy. The role of radon that is present in the mineral spring water of both spas is discussed together with the theories of its actions as a potential therapeutic agent. The chapter then continues with the examination of several aspects of patient response to Balneotherapy. This therapy is affected not just by the culturally constructed beliefs in its potential but also by other elements of behaviour. These include the degree of patient cooperation with the therapy, involvement with other members of the patient community, participation in non-medical activities available in the spas examined, or the temporary move into a new and separate space away from everyday life and its obligations.

This background material is followed by three chapters that combine into the ethnographic part of the thesis. Chapter 4 examines the geographical, historical, and economic background to the two spas. It outlines the history of the origin of the springs' use in medicine and describes how they are currently exploited in medical and commercial context. Chapter 5 concentrates on the medical establishments which were the locations of this research, their history and their management, and describes the various medical procedures they use in Balneotherapy.

In Chapter 6 I introduce the patients and give their version of their illness experiences and the effect the encounter with the therapy has had on their state of health. Their illness narratives cover their medical beliefs and expectations with regards to the

therapy, their behaviour as patients and their overall experience of both the spas and the effectiveness of their healing methods.

This culturally constructed experience of illness will be summed up in the final, 'Conclusion', section. This will sum up the cultural elements and put the lived patient experience into a wider context.

Chapter 2: Methodology

The health care settings for this study were a Japanese and a Czech hospital both of which are located in areas rich in natural mineral springs. The ethnographic material was obtained mainly through semi-structured interviews with hospital patients but data was also collected during as much participant observation as was possible in the restrictive medical environment presented by the hospitals. Historical material relating to local history of both spas came mainly from publications by local historians. Details of the background to some of the medical procedures and patient statistics were provided by the hospital administration and substantiated by the physicians.

This chapter will first of all give a chronology of the research followed by a description of the relevant activities undertaken prior to going into the field. It will then outline the fieldwork periods and describe the data collection methods. The final section will draw attention to the many differences arising from the fact that the study was based in two cultures and explain how the methodological issues that arose as a result of this situation were handled in the course of the work.

2.1 The Research process

2.1.1 Chronology of research

Starting in 2005 I spent the first year in exploring the existing literature on the subject of the history and practical application of Balneotherapy, applying for grants and making arrangements for the first period of my fieldwork in Japan. This first phase was then followed by several more episodes of working in the field each requiring similar planning. The following table gives an outline of all fieldwork periods together with the respective financial support obtained.

Date	Activity	Support
June-Sept 2006	Fieldwork – Okayama University Hospital in Misasa Onsen, Japan	Fully supported by the JFEC (Japan Foundation Endowment Committee).
June-July 2007	Fieldwork - Jáchymov Spa, Czech Republic	Self-financing
June 2008	Return to Jáchymov for further data collection	Self-financing
Oct-Dec 2009	Return to Misasa for further data collection	Partially funded by the Sasakawa Foundation

As the table shows there was a one-year long interval between subsequent visits to Jáchymov and a three-year long break before my return to Misasa. These return visits were valuable in that they allowed for time-related differences in some aspects of the study to be noted. First of all the intervals allowed for any changes in the patients' opinions of the treatment to be recorded. Many of the Czech, as well as a few of the Japanese, patients were returnees, and the two separate periods of fieldwork enabled me to meet them twice and note if their feelings towards and experiences of the therapy had changed over this time. The second change concerned the way the therapy was viewed by the physicians. This may have reflected not only the possible emergence of new medical opinions of specifically this type of balneotherapy but also may have been accounted for by new management practices or even changing economic or political conditions. Changes in some of these parameters were indeed found in the course of this study and are described in detail in Chapter 5.

2.1.2 Activities completed prior to going to the field

Background reading

In preparation for fieldwork I read extensively on several topics that seemed relevant at the start of the project. These included history of baths and bathing in Europe and Japan, the rise of spa medicine, the potential effect of radon on living organism and many aspects of Japanese culture including spatial classification, ideas of purity and pollution and spiritual associations with water.

Establishing contacts

The teaching hospital which forms part of the Medical Faculty of Okayama University is where I was hoping to be based while working in Japan. I was lucky to be able to get in touch with someone I already knew, i.e. Dr.Hosaki, the senior hospital consultant who treated me while I was ill during my previous visit five years earlier. He was very helpful and negotiated my access to the hospital facilities with the Director, and helped me with the application for approval by the Medical Ethics Committee. He also organized my accommodation in the University Boarding House located close to the hospital. Once I started work he arranged for me to be provided with a desk in the Okayama hospital doctors' room and to have access to the hospital administrative facilities, the library and the Internet. He was also indirectly instrumental in my being able to work in the second location – Jáchymov Spa. At a recent conference in Hokkaido (Japan) he met some of the Czech balneologists, and it was through him that, when I decided to widen the research to include a comparison with a European spa, I first made contacts with the Chief Spa physician in Karlovy Vary. She then introduced me to her colleague, Dr.Draská, the Chief Physician in Jáchymov who made it possible for me to come and do the second part of my research there. She helped me to obtain ethical clearance and arranged my accommodation. I lived in staff housing situated about a mile distant from the spa house where I was based.

Ethical considerations

The study involved interviews with hospital patients which meant that I had to follow guidelines contained in the code of moral values and principles that apply to the practice of medicine. I had to provide potential recruits with sufficient information to allow them to decide whether or not they want to take part. They had to be assured that their taking part will not in any way alter their treatment, and that information collected about them will be kept strictly confidential. According to these guidelines it was necessary to obtain clearance for the work from the Brookes University Ethics Committee which was given (UREC Registration No.: 060196). Later on, after I decided to include a cross- cultural element into the enquiry, this first request was followed by a further application for a permission to work in the second field area. This was again granted by the UREC committee. Finally, as a result of some of the findings in the Czech Republic it became necessary to return for a further period of fieldwork in Japan which necessitated a further, again successful, application to UREC.

At the same time I had to satisfy the ethical requirements of the medical institutions in Japan and in the Czech Republic. I first of all applied to the Medical Ethics Committee of Okayama University Medical School for ethical clearance that would allow me to work with patients in their branch of the School in Misasa Onsen. The reason for choosing this hospital was that I had certain amount of 'inside' knowledge of this establishment as a result of having been a patient there. As the hospital administration had never had an application from a non-medical researcher, whether Japanese or foreign, some of the requirements and procedures were as new to them as they were to me. Despite the initial uncertainties, the application was eventually approved by the Okayama University Medical Ethics Committee.

I later needed a second ethics clearance which would allow me to work in Jáchymov Spa in the Czech Republic. Once more I was successful and the spa's Medical Ethics Committee approved my request to work with their patients.

2.1.3 Fieldwork

The first period of fieldwork took place in Misasa in Japan where I was attached to the Okayama University Hospital. This stage lasted three months and occurred in the summer of 2006. After a few weeks I found that there was another hospital in the village, the Misasa Onsen Hospital, a successful private facility now owned by the Japan Medical Association. I made contacts with the Director who turned out to be an anglophile and a golf enthusiast and, having strategically lost a game of golf to him, I was allowed to visit the hospital and even interview several of the patients.

The following summer (2007) I spent two months in the Czech Republic where I was attached to one of the three large spa houses (explained in detail in Chapter 5) in Jáchymov. Some of my findings here indicated that the positive outcome of the spa therapy, as reported by the patients, seemed to include certain elements of play. This was a new aspect of the enquiry, one that I did not find in Japan, or at least that I had overlooked in the patients' narratives. In the light of these findings I decided to return to Misasa for a further period of fieldwork and try to look more carefully behind what people were telling me they do i.e. focus on what they were actually doing, and how they were doing it. First, however, I returned to Jáchymov for one month to meet up with some of the patients I interviewed in 2007. This was in order to discuss any changes that might have occurred in the intervening period as well as to inquire more fully about their feelings towards the presence of radon in the water.

2.1.4 Data – recording and keeping

The ethnographic method used in both locations was based on semi-structured interviews which were combined with participant observation and informal conversations with patients. The amount of my participant observation was often limited because of the medical character of some of the activities. Patient data and ideas about the therapy were supplemented by information obtained during the many conversations I had with the medical staff. As a trained physiologist I had a definite advantage in being able to follow most of the detailed medical information given to me by the physicians.

To make sure the participants understood the nature of the study they were provided with a brief written explanation of the subject, in their own language, prior to the interview. They were also assured of confidentiality as well as of anonymity. The interviews themselves always started with my asking if the person being interviewed had any questions or concerns about the study in general and their taking part in the study in particular. Each participant was then asked to sign a Consent Form to show that they had received sufficient information about the study and that they fully understood that their participation was voluntary, unpaid and anonymous.

I took detailed long-hand notes during each interview. These were transferred to my computer immediately at the conclusion of each interview. Copies of all the data were kept on my laptop which is protected by a password.

2.2 Issues arising from working in two cultures

The two sites had many similar characteristics e.g. the quality of the water, the therapeutic procedures rooted in the use of this water, the illnesses treated, and the outcome of the therapy. The general method of enquiry i.e. the ethnographic method based on interviews and participant observation was also identical. Differences

however emerged as soon as I started fieldwork. The most immediate one was the amount of freedom I had in choosing my participants and in arranging interviews. The personality of the researcher as perceived by the participants and the use of the two languages, Japanese and Czech, were some of the others. It was important to be aware of these differences and to keep them constantly in mind in order to minimize their effect on the data collected. The design therefore had to allow flexibility in certain areas which are discussed below.

2.2.1 Getting started

I first of all needed to familiarize myself with both the layout and the management of the large medical establishments I was attached to in the two locations. I also needed to learn about the various elements of the therapy and gain access to as many of the treatment areas as possible. All of this required cooperation of the hospital management. The managements of both Misasa and Jáchymov were extremely helpful, and I was quickly able to feel quite comfortable moving around the hospitals on my own. Each site however handled the problem of my presence differently. One common feature was that having an outsider interested in the hospital work was something of a, positive, novelty. I was the first foreign scholar (and a non-medic) working in the Japanese hospital, and the first anthropologist ever interested in the spa in Jáchymov. I experienced very positive reaction to my work in both locations. In Japan they were happy that someone from the 'outside' wanted to gain a deeper understanding of how and why 'their' therapy was used. This in reality meant that just as much as I was interested in learning about Japanese balneotherapeutic methods the physicians wanted to learn about me and my findings. There was thus a two-way exchange of questions and ideas. Before departure I was asked to give a seminar on my results to all the medical staff.

In Jáchymov, as I was the first anthropologist working in the spa, nobody was initially sure what I was doing and why. There was nevertheless a very positive attitude to the study from both the staff and the patients. Several of the physicians were positively delighted that finally an anthropologist shows an interest in their work which they themselves saw as constituting a very important component of the Czech healthcare system. This interest lead eventually to my being invited to give a presentation of the findings at the Annual Conference on Czech Spa Medicine held in Jáchymov in December 2007.

Misasa

My first morning in the hospital coincided with the staff monthly meeting when all the medical and administrative personnel of the hospital assemble in a large meeting room for a briefing given by the Director. Just prior to attending this meeting I was asked to put on a white coat. Each grade or position in the hospital was clearly marked by the type of uniform they wore. The coat I was expected to wear while inside the hospital was the same as those worn by the physicians. It therefore immediately marked me out to be someone in authority. Seen as a means of communicating information about ourselves or a form of recognition of an underlying hierarchical structure uniforms confirm the roles people hold in a system. This was one of the many demonstration of Hendry's 'wrapping principle', one that applies to "wrapping of people by people" (Hendry, 1993). I became concerned that this imposed a level of formality, a possible barrier between me and the participants, which could have a potentially damaging effect on the tone of my interviews of the patients. I therefore stopped wearing the coat very early on during my work.

The meeting that took place on my first morning presented a great opportunity for me to be introduced to all the hospital staff. Although it was daunting at the time I soon began fully to appreciate how useful this exercise was for my work. Even if I could not

remember all of the about seventy plus people who attended that morning meeting they certainly all remembered me. This greatly facilitated my ability to visit the many different parts of the hospital, ask questions, observe the activities that went on, and even participate in some of them. I was made instantly welcome wherever I went. This happy beginning was followed by a brief initial period when a disparity emerged between what I wanted to do myself, and what I was expected, or more accurately allowed, to do by the management, and indeed everyone else. The expectations were of my being at my allocated desk five days a week between the hours of eight in the morning and five in the evening. As it quickly became apparent that that was not how I was intending to conduct the research, several members of the hospital management gently expressed their surprise about my not conforming to these rules. Gradually, however, after discussing this issue with several of the physicians, the staff slowly accepted that my way of working, although unorthodox by their standards, may be simply different, and there was a change of atmosphere towards a more relaxed state of cooperation.

Jáchymov

My need to access different parts of the hospital here was the same as in Misasa but the way this need was accommodated was handled very differently by the management. The Chief Physician, who was my gatekeeper and who negotiated all the necessary arrangements with the hospital management, met me the first morning after her surgery. She briefly outlined how the therapy works and the way it was used in the spa, and then introduced me to the three remaining physicians as well as to the Matron. From then on the Matron was the person I would contact with any problems. She became my 'key' to the many hospital doors I needed to 'go through' in the course of the research. Despite the fact that, yet again, different occupation grades were marked by different types of uniform, I was not expected to mark myself as someone

in authority and wear a white coat. The spa patients also wore their own clothes and so, as far as they were concerned, I appeared to be yet another patient, and not someone in authority. There were also no expectations of 'official working hours' in Jáchymov. As long as I did not get 'in the way' of the running of the hospital I was welcomed to spend however much time I needed observing the on-going activities, contacting and interviewing patients and even taking part in some of the activities.

2.2.2 Accessing Participants

The significant difference in the amount of freedom I was given by the management of the medical institutions under study affected several aspects of the work from recruiting the participants to maintaining access to them throughout the study. The methods I adopted had to allow for the much stricter management control in Misasa on the one hand and the much more relaxed attitude in Jáchymov on the other.

Misasa

Although prior to coming I only knew of the Okayama University Hospital once I found out that there is a second hospital in Misasa I asked to be introduced to its Director. I hoped that this would enable me to recruit participants of the study from a similar but separate medical establishment. The two hospitals are located within about half a mile of each other in an area rich in thermo-mineral springs. These are owned by the hospitals and used to fill both the large exercise pools used for Balneotherapy and the hospital *o-furo*. Neither hospital was entirely given over to Balneotherapy. They also functioned as general hospitals which meant that they included not just those receiving Balneotherapy but also many other patients, including those needing surgery. As I had no way of knowing what each patient was treated for I had to rely on the individual physicians in both hospitals to suggest who the potential participants might be. Only then could I try and make contact with them on behalf of my research. A further

complication stemmed from the fact that I was not allowed to visit the hospital wards which meant that I was not able to meet the patients on an informal basis at all. This situation eventually improved when, after the first few weeks, I was finally permitted to join the weekly ward-round. It was then that I was able to meet some of the patients and familiarize myself with their medical problems. Even following the rounds I was not allowed to get in touch with the patients directly. I had to ask each physician to contact the patients and pass on the information I had written about the project. Once they have read the information and decided that they would be prepared to take part in the study they would tell the doctor who in turn would inform me. In the initial stages I was therefore not allowed to act independently and was totally dependent on the doctors who acted as go-betweens between me and the potential participants. This use of an intermediary in choosing my participants was initially a problem as I clearly had very little input into the selection. It also quickly became clear that the first group of participants were all going to be women. I brought this to the attention of the physicians who explained that the reason they chose women was that they are 'easier to approach and get interested' in the study. Following our little discussion, however, the gender discrepancy was corrected, the doctors approached some of the men and I was able to interview several interesting male patients.

Jáchymov

Finding participants in Jáchymov was much more straightforward. All those being treated here came specifically because of the Balneotherapy i.e. all patients, not just a selected group, represented potential participants. At our first meeting the Chief Physician explained to me that, owing to the large amount of information they need to give the patients during their consultation periods, the doctors did not have time to mention or explain my study to their patients. I was expected to go and find my participants myself, i.e. I was given the freedom to choose those I wished to interview and to approach them directly myself.

2.2.3 The Interviews

The aim of the interviews was to find out what medical beliefs the patients held and what their personal experience of the therapy was. In all, 33 patients in Misasa (21 women and 12 men) and 24 in Jáchymov (12 women and 12 men) were interviewed. The average ages were 66.5 and 62.5 years respectively, this lower age in Jáchymov reflecting the popularity of the spa for patients suffering from ankylosing spondilitis⁸ that can occur at younger age. The educational and economic backgrounds of patients were varied and included a broad spectrum from those with academic and professional qualifications to businessmen, tradesmen, clerks and housewives. During the interviews I concentrated on feelings and beliefs rather than on detailed medical histories of each patient. If people wanted to tell me about their illness, and many did, that was their free choice.

Each interview started with a series of questions that, although loosely connected to the subject under investigation, were mainly designed to create a relaxed and informal atmosphere. These opening questions had to be carefully chosen to allow for the cultural differences between the two locations.

Misasa

The first hurdle in conducting the interviews, i.e. finding participants, was followed by the second i.e. agreeing on a suitable venue. This needed to be private because of the very personal nature of the subject, but it also needed to be comfortable so that people could feel relaxed. Interviewing on the wards was not an option for two reasons. Misasa patients were mostly accommodated in rooms of four and so the first reason was one of lack of privacy. Although in theory this was not a problem with the few patients who occupied the private rooms I could not carry out interviews there either as I was barred from visiting the wards on my own in order not to disturb the patients' rest periods. Many patients could not venture outside the hospital and so I

⁸ A chronic inflammatory disease of the skeleton.

needed to find a room within the hospital compound that could be accessed by all. After rejecting two large echoing rooms I was eventually offered a small, more intimate room, used for meetings of the hospital management. In Japan, the emphasis on creating as relaxed an environment as possible was especially important because the interviews took place only after the often long drawn-out process of finding the participants. This occasionally involved a great deal of official interference and delay into which I had in fact very little input. Thus by the time the patient and I finally sat down to have a face-to-face talk it often felt more like a job interview or an exam than a relaxed talk, and most of the patients appeared quite apprehensive.

The interviews started by my introducing myself and presenting each participant with my *meishi*, a Japanese business card that is usually exchanged when two people meet in a business context for the first time. It contains information about the person's company and the position they hold, and so my *meishi* gave information about both Brookes and Okayama Universities. This usually caused questions being asked about me which lightened the atmosphere and redressed the power relationship. There was a very definite need to open the meeting with a conversation about something different, something pleasant, and something that would sustain a more informal atmosphere. I achieved this by eventually starting the interview with questions about the patient's family. As most of the patients were very happy to talk about their children, and especially their grandchildren, in great detail this often lead to quite a lengthy and animated discussion. Many of the Japanese patients live with their children and liked to talk about how much they missed them. As people relaxed the conversation would gradually move onto other topics, chiefly onto discussion of their health problems, the hospital in general and the type of care they were receiving personally in particular. The second part of the interview was given entirely to the participants' spa experiences, their expectations, their feelings about the therapy, their

likes or dislikes and the results as they saw them. This also covered anything from why and on whose recommendation they chose to come to Misasa to what were their previous experiences of spa medicine, if indeed any. We also discussed their attitude to this type of medicine and whether they combined it with other types of medicine i.e. the use of drugs. We talked about their beliefs in the power of the hot *onsen* water, and about the way they spent their days both within and without their prescribed care regimes.

Jáchymov

The whole interviewing experience in Jáchymov was entirely different i.e. much less supervised by the management and much more relaxed. Here there was no one acting as a go-between to connect me with potential participants. I had direct access to the patients, was able to approach them often while they were relaxing between treatments, and, guided by the patients' preferences, we were able to decide together on the time and place of the interview. The spa guests were accommodated in single or double hotel-type rooms that again did not seem acceptable for conducting interviews. At least not one of the participants suggested we met there. All the participants were mobile and all spent large amount of their free time outside their spa houses which allowed for a much greater choice of suitable venues. There were indeed many attractive, non- institutional, places available in the spa which provided suitable venues for informal and relaxed talks.

It was not only the method of finding participants and deciding on a venue that were very different in Jáchymov. The opening questions also differed from those I used in Misasa. As will be discussed in Chapter 6 the patient narratives here more or less excluded their families. The spa guests seemed to have left these entirely in the outside world at the point of entry into the enclosed world of the spa. The opening

questions were therefore not grounded in families and family life but in the patients' life stories as affected mostly by politics. Most of the Jáchymov's participants were very close to my own age which meant that we had broadly similar childhood experiences. Whether we liked it or not, the life of each one of us was in some way affected by the then communist system of government that was running the country between the nineteen fifties and nineteen nineties. Dominated by the ruling ideology of the communist Soviet Union life was often very difficult and full of frustrations which, as is often the case with adversity, helped to create bonds between people. The interviews thus usually started by our 'comparing notes' on how our lives have developed despite the political difficulties we all experienced. This 'nostalgia trip' formed the prelude to the discussion about health issues which followed a pattern similar to the one already described in the Japanese context.

2.2.4 The Use of Language

My ability to use the local language in each fieldwork area represented another difference in the methodology used between the two locations. Czech is my native language and I have not lost any of my fluency in the more than forty years since leaving the country. Communication in Jáchymov was thus easy to the extent that I was aware of the emotional nuances, hesitations or tiny uncertainties that were expressed during the patient narratives. In Japan, while it was relatively straightforward to communicate with people speaking grammatically correct Japanese, the strong Misasa dialect represented a real challenge for me. Occasionally it was therefore necessary to use an interpreter, and I used two different people. The first was a laboratory technician who works in the Okayama University hospital where I met first made her acquaintance. She was born in the village and, although educated at Osaka University, she and her husband and children live in the village where they share the family house with her parents. She is therefore familiar with the local dialect. The second interpreter

was a French JET participant (Japan Exchange and Teaching)⁹ who spoke both excellent Japanese and English.

2.2.5 The two personalities

The third methodological difference stemmed from my personal position as an anthropologist, as perceived by those I was studying. This perception was again very different between Japan and the Czech Republic. I was seen as a foreigner and an outsider in the former, and as a native, or an insider, in the latter. This latter position was nevertheless not a completely clear-cut one as will be outlined below.

Misasa

While working in rural Japan I was studying a different culture and my position was that of a foreign anthropologist learning about members of a different society. There are only very few non-Japanese living in this part of Japan, and my physical features (especially height and hair colour) made me stand out from those I was studying. To minimize that, I usually dressed in colours used by the local women i.e. brown and dark purple or black, and did not wear the white coat given to me by the hospital management. This would have put even more distance between me and those I was interviewing. Despite all this, the best I could hope for was that people would simply get used to seeing me around the hospital, that I became a more familiar object, and that I could eventually be accepted as one of the hospital staff people encountered on everyday basis. To facilitate this I spent long periods of time observing the on-going activities in the various public areas of the hospitals. I often joined the long queue in the out-patient waiting area, sat and talked with the patients in the hot mud treatment room, or visited the physiotherapy department or the exercise pool. This way, although I was noticed, I was also slowly accepted as part of the hospital both by patients and staff alike.

⁹ Programme aimed at promoting grass-roots international exchange between Japan and other nations.

My foreignness had several other effects. On the one hand it gave me certain advantages. Foreign anthropologists are often treated extremely well in Japan, i.e. almost receiving the 'red-carpet treatment' in the way they are accommodated (Ohnuki-Tierney, 1998). This was definitely the case in Misasa where the management and all the staff could not have been more welcoming and helpful to me. At the same time my foreignness put me under certain obligations. Like most English-speaking visitors to Japan I was asked to give English conversation classes. In my case these were to the hospital staff, but fortunately these turned out to be enjoyable and usually quite funny evening sessions.

I was of course not so naïve as to think that I can become truly inconspicuous. I was the only foreign person in the hospital but I was hoping that even if I started out as a stranger, that "sympathies and ties would develop through engaged coexistence" (Narayan, 1993) which might subsume some of the difference within relationships and allow my more subjective involvement. The concern I had was that my status as the 'outsider' or the 'observer' would influence the responses of the participants. As Crapanzano points out, the ethnographic encounter creates a 'negotiated reality, in which the way the informants tell their stories is coloured by the anthropologist's interest in some aspect of their culture' (Crapanzano, 1980). The patients in Misasa therefore might have been 'performing' for me during the interviews and telling me what they thought I, a foreigner, wanted to (or should) hear about their culture. I thus tried to minimize the dichotomy between the observer and the observed by following Narayan's suggestion of 'shifting identification' (Narayan, 1993). This is where factors such as education, gender, age class or other characteristics can outweigh the cultural identity we associate with the insider/outsider status. I therefore always tried to find some context or some aspect of my identity in which each patient and I could be drawn

together which would help to minimize the perceived differences in culture and power between us. Age was definitely something we had in common. For the first time in my life I felt that being over sixty can have real advantages. My grey hair and my brood of grandchildren combined to create a common arena where I could meet many of the participants on the same level and talk about the same subjects. When the focal point of the interviews finally turned to health problems and spa therapy experience many of the originally sharp divides were less pronounced than at the outset of the interview.

Jáchymov

In the Czech Republic I was faced with a situation similar to the one the Japanese anthropologist Ohnuki-Tierney experienced while working in her native Japan (Ohnuki-Tierney, 1998). She also found that after many years of living abroad trying to interpret her own culture was more difficult. It was harder to do what Powdermaker calls 'walk the line between detachment and involvement' (Powdermaker, 1967). Distancing myself was however necessary for the 'negotiated reality' to be successfully achieved. Branching out to study my own culture carried with it several implications ranging from the use of language to the nature of the data collected. Of course, given the diversity within cultural domains and across groups, even the most experienced of "native" anthropologists cannot know everything about his or her own society (Aguilar, 1981). So here I was, a native anthropologist, with the advantage of being part of the society from the start and fitting in well with the people I was going to study. Yet, that was not how I was perceived by the participants in Jáchymov. Although I have all the racial characteristics of a native Slav, and although age again presented a common bond between us, my native status was viewed with some reservations. These were connected with my having lived abroad during the last forty politically turbulent years and, although I was accepted, my identity was seen as that of a native oddity by the patients.

This situation also presented an extra problem. Despite living in the UK for several decades I still instinctively took the knowledge and understanding of my native country's customs and modes of behaviour for granted. However, there were times when I became aware just how far I had travelled from my own culture in the past forty years. I learnt quickly that I had to keep reminding myself of the need to maintain distance as well as curiosity in order not to miss some of the patterns of behaviour or question some of the structures of that culture. I therefore needed to look for something in my cultural identity that would address, and hopefully lessen, the distance created by my living abroad. This time I chose to get more involved in the very busy social life many of the patients engaged in and joined in the long afternoon walks and went to several of the evening dancing venues. As I gradually immersed myself into the world of the spa I was aware that I was beginning to reconstruct myself back into the Czech society. I did not feel nearly as strongly as Dorinne Kondo who in her 'Crafting Self' (Kondo, 1990) felt pressurised into rewriting her identity of a Japanese living permanently abroad into one of a Japanese living in Japan, but these sentiments were certainly there. Over the weeks of fieldwork I did become 'more and more like them' (Ohnuki-Tierney, 1998), and so I benefited by leaving after the first summer and returning a year later with fresh eyes and regained perspective.

Chapter 3: Background

The system of exploiting natural mineral springs in healing as used in spa therapy is embedded in historically grounded and culturally specific systems of meanings. In order to be able to understand the use of this therapy within two cultural systems of medicine this chapter will summarize some of the factors that interact in the construction of the patient experience of an illness episode, and that are common to the two chosen sites. These factors concern both similarities and differences in the way Balneotherapy is practiced in the two spas. The similarities stem from the presence of the local natural mineral springs with similar properties, from the underlying theory of Balneotherapy that can in both countries be traced back to ancient European history and from the similar route this theory took to arrive in the two places, i.e. with German-educated physicians. Yet another common element is the presence of radon gas in the water and its role in the healing process that uses this particular type of Balneotherapy. The explanation of its action is embedded in the theory of hormesis that the physicians in both Misasa Onsen and Jáchymov subscribe to, and that will be explained below.

The therapy's aim is to relieve pain and restore balance of the body which it is attempting to achieve by a combination of many factors. Centrally important is the medical use of the thermal spring water which is supervised by trained medical professionals. The reasons for the influence of the other factors are many and varied because we are dealing with patients i.e. human beings who, because they are culturally grounded, and because we are dealing with two cultures, differ in their traditional religious and medical beliefs and practices. They have different expectations that they place within their own cultural context. These they bring to their spa experience. They may have different ideas about how to interact with other patients, how to interact with their physicians, what amount of effort to put into co-operation

with the medical advice given to them; what value to put on their surroundings, or different views on the extent to which they choose to take part in other activities offered by the spa location. All of these factors combine to form the 'lived experience of illness' in the spa.

In order to understand the meaning the different elements of spa experience have for the patients some of these elements will be clarified in this chapter. After a brief outline of the general features of natural springs, it will sketch the rise of Balneology and Balneotherapy in history. During its long development this technique has incorporated many new elements that can be detected in its current use. As they may influence both the medical practice and the patient experience this historical development is summarized. The scientific theories used by the medical professionals in Japan and the Czech Republic form the next feature focused on before the many culturally-generated elements affecting this therapy will be discussed in the latter part of the chapter.

3.1 Thermo-mineral waters – their association with cleansing and purification

Naturally occurring thermo-mineral waters are defined as a special type of ground water that is found all over the surface of the earth in places of tectonic activities (Dvorjetski, 2007; Hartley, 1978). Their water properties e.g. temperature or the varied concentrations of specific minerals and gases allow them to be described and classified in terms of usefulness for the treatment of specific disorders (Jackson, 1990; Křížek, 2002; Lund, 1990). Springs where the average water temperature exceeds that of the average annual temperature of the area where they are located are classed as thermal (Dvorjetski, 2007). Minerals found in natural spring waters include several common minerals like magnesium, sodium, calcium or iron as well as traces of many others –

antimony, sulphur, silver, beryllium etc. Some springs also include radioactive elements of which radon gas is the most common (Dvorjetski, 2007; Erickson, 2007a; Forster, 1963).

Beliefs in the curative powers of mineral waters go back to prehistoric times, and their use for healing is widespread throughout Europe e.g. in Switzerland, Germany, Austria and others, but also in Japan (Altman, 2000; Clark, 1994; Erickson, 2007a; Lund, 1990). The English word spa¹⁰ is associated with places where, based on the presence of natural mineral springs, not only pleasure but also treatment of various illnesses can be sought. Citizens of many European countries, e.g. France, Italy, Germany or the Czech Republic, have free access to Balneotherapy which is integrated into their state-supported medical health care. In all the above mentioned countries the origins of the theory of Balneotherapy can be traced back to ancient Greece and from there to Rome through which it spread throughout Europe (Burachovič and Wieser, 2001; Bynum and Porter, 1993; Rolls, 1988). The Czech Republic, my native country, also has a long history of spa medicine the theory of which was introduced into the country in the 18th Century via physicians who were educated in universities where German was the main language used (Křížek, 2002; Kumpera, 2004).

The Japanese word for thermo-mineral springs is *onsen*. The name comes from two *Kanji*¹¹ characters 温泉 that together mean 'hot water spring'. There are about 23000 hot springs in Japan of which around 2400 are used as spas (Agishi and Ohtsuka, 1995). The current practice of Balneotherapy in Japan is based on a theory that arrived in the country with German physicians soon after the Meiji Restoration in the second half of the nineteenth century. This route shows similarities to the one balneology took

¹⁰ OED definition: spa-a mineral spring considered to have health-giving properties; the name arises from Spa, a town in Belgium.

¹¹ System of Japanese writing using Chinese characters.

to arrive in the Czech Republic. It too was brought in by German-trained physicians in the 19th Century (Bowers, 1970).

Given that the system of Balneotherapy in the two countries has a common origin we might expect that there are common elements both in the practice and the outcome of the therapy. Before looking in detail at those I want to give a brief summary of the history of balneotherapy in Europe and how the principles on which it is based can trace their passage first to Germany and from there to Japan.

3.1.1 The Greco-Roman world

The principle therapies of ancient medicine were primarily preventative. Keeping in good health in Greece was also more or less a moral obligation, or a citizen's duty (Yegül, 1992). The history of what Jonsen in his review of the history of medical ethics calls 'rational medicine' (Jonsen, 2000) began to evolve on the Ionian coast and from the very beginning included the systematic use of thermo-mineral waters (Jackson, 1990). Bathing was seen as much more than a functional or hygienic necessity but was considered integral to personal health maintenance.

Public baths provision began in Greece at around the 6th century BC when bathing in public houses was usually combined with military training (Dalby, 2000; Nolte, 2001). Baths were initially attached to gymnasiums where the, often cold, water was used for brief periods. This sort of bathing provided an invigorating part of the exercise (Toner, 1995). Natural mineral springs that produced waters of different temperatures and composition, particularly the thermo-mineral springs, were held in great esteem and often used for the treatment and rehabilitation of wounded soldiers (Thomson, 1978). Their popularity differed according to the curative qualities of their waters, the natural heat and mineral content (Dvorjetski, 2001-2002; Jackson, 1990).

Both in ancient Greece, and later in Rome, bathing and healing places were often associated with various deities. The Greek god Asclepius was one of the most important deities connected with health and became so prominent that his name became the symbol of the perfect physician (Dubos, 1968). His symbol, the 'Rod of Asclepius', a serpent-entwined staff is used as the symbol of medicine even today. One of the ways of maintaining health that Asclepius advocated was a regime of baths supplemented by exercise and proper diet. He thus endorsed what are now the three corner stones of modern Balneotherapy. Of his daughters Hygieia (Health) was connected with the prevention of disease and the maintenance of health while Panacea (Cure All) was linked to the treatment of diseases. These two goddesses symbolized two approaches to the control of disease, and became associated with health, hygiene, physical prowess and beauty (Yegül, 1992). The images of all three deities could be found in ancient Greece and Rome in places dedicated to cures and healing. Although bath and bathing seemed definitely to belong into the secular space, the admission of these deities into the profane world of baths was probably intended subliminally to reinforce the health aspect of the activity (Yegül, 1992).

The numerous lay physicians who followed the teachings of Asclepius were organized in medical guilds or Asclepiads. One of the most famous members of the Asclepiads was Hippocrates of Cos (460-370BC), considered by many to be the Father of modern European medicine (Jackson, 1990; Temkin, 1991). His 'scientific' approach to medicine was founded on detailed and methodical observations of the patients and their symptoms. He favoured principles of treatment that were based on natural philosophy, anatomy and physiology (Temkin, 1991). One of the fundamental principles of Hippocratic medicine that had a profound effect on the development of modern medicine involved radical ideas on disease causation. Hippocratic teaching moved away from supernatural causes of diseases and replaced them with natural theories of

causation (Brody, 2003; Jonsen, 2000). That meant that they could be studied, analysed and understood in natural terms (Bynum and Porter, 1993; Dubos, 1968). Hippocrates also contended that it was not possible properly to understand the workings of the body without recognizing the involvement of both sides of the dual nature of the structure, i.e. the mind and the body. Some of these ideas are at the basis of what makes him so attractive to so many modern healers. Hippocratic medicine itself was holistic and also conservative because it was non-invasive. It encouraged a tradition in which doctors sought to treat complaints first through management, occasionally through drugs and only as a last resort surgically. It tried most of all to preserve health. Health was seen as the expression of harmony between the environment and the way of life, i.e. manifestation of balance between the various components of man's nature i.e. the four body humours: blood, yellow bile, black bile and phlegm (Bivins, 2007; Lloyd, 1970). A healthy body was one in balance and one of the ways Hippocrates recommended for regulating this humoral balance was by taking a bath (Gevitz, 1993; Jackson, 1990).

Hippocratic medicine, although it had religious associations, was secular (Temkin, 1991). It promised to heal by a combination of the physician's knowledge, illness prevention and the patient's co-operation, and by acknowledging the dependence of mind and body on each other. Of the many ideas and principles of Hippocratic medicine that are still relevant and applicable to this day are those concerning the importance of proper observation of a patient and the importance of a positive attitude and the active cooperation of the patient (Jackson, 1990). Hippocrates also maintained that not only did the patient's will to heal play an important part in the process of treatment but that it was in fact his duty, helped by the physician, to oppose illness (Temkin, 1991).

The world of the Roman bath

Many Hippocratic teachings were preserved and transmitted from Greece to Rome by the Greek physician and philosopher Galen (129-200 AD) (Dvorjetski, 2001-2002; Jonsen, 2000; Lloyd, 1970). Galen endorsed the theory of the four humours and combined it with notions of the four elements that formed the universe – earth, air, fire and water- that link together man and macrocosm (Nutton, 1993). This amalgamation gave his theories such prestige and strength that they dominated European medical thinking until the 18th century (Bynum and Porter, 1993). Galenic medicine was based on the interpretations of changes in the quantities and qualities of the humours, and the view that diseases result from their disequilibrium. Restoring the humoral balance leads to return to health, and Galen in his writing recommended various ways of achieving this, one of which is the use of therapeutic baths (Loudon, 1997; Yegül, 1992).

The Romans used Balneotherapy in an attempt to treat various diseases such as disorders of the joints and urinary tract, dermatological conditions, venereal diseases, gall stones, epilepsy and liver and spleen problems (Thomson, 1978), as well as nervous disorders (Allen, 1998; Jackson, 1990). However, baths were not primarily used for healing. Many of the baths the Romans built were in beautiful surroundings and were seen as centres of relaxation and pleasure rather than places of education and exercise as the Greeks before saw them (Toner, 1995). One of the most important centres of thermo-mineral bathing in antiquity was the volcanic region that lies just north-west of the Bay of Naples, the so called Phlegraen Fields. The core of this area was the Bay of Baiae, which developed into a huge complex that offered bathing for pleasure but also provided curative facilities similar to those of the later centres of Balneotherapy in Europe (Dvorjetski, 2007; Jackson, 1990; Yegül, 1992).

In places like ancient Rome, where the living areas had no bathrooms and cleanliness was considered important, provision of public baths was a necessity. The act of getting clean went far beyond the functional and hygienic necessities of simple washing. It became a daily social event to be shared with friends. The importance of baths and bathing for the Romans can be judged from the number of baths they built during the expansion of the Roman Empire. They took their bathing practices with them and systematically built baths wherever they went. When they built a town, they built a bath, often taking over a site of a spring that may have been used for religious purposes by its previous occupants. The local deity was usually combined with a parallel Greco-Roman deity that was chosen for the similarities of its powers. Few occupied European provinces lacked a major spa and indeed in some areas they were particularly numerous. These include Germany (Jackson, 1990), France and Italy as well as Austria or the present Czech Republic (Wechsberg, 1979). Many of the European spas established by the Romans, e.g. the Swiss spa of Baden, the German spas of Wiesbaden and Aachen, and Bath in England, remain to this day well-known centres of relaxation and healing as well as social life. They utilize the local natural subterranean products like mineral waters, thermal springs, earth gases and mud substances as principal therapeutic elements. Bath, one of the most popular centres of the Roman world, owes its fame partly to the continuous use of its thermal facilities since its conception until today (Cunliffe, 1986; Yegül, 1992).

Spending time at the baths

The world of the Roman bath, both cleansing and medicinal, was leisurely and sensuous (Yegül, 1992). Many extra activities were available to bathers which elevated the act of bathing into a social occasion. The assortment of diversions included music and gambling, and one could purchase food, drink or sex in the baths (Dvorjetski, 2007; Porter, 1990). Prostitutes of both sexes could be found in and around the public baths (Dvorjetski, 2001-2002; Yegül, 1992). Dvorjetski in her work on Roman spas in the

Eastern Mediterranean basin indeed concludes that thermo-mineral baths were places “of bathing, of ritual, of therapy and of entertainment, including licentious immorality” (Dvorjetski, 2001-2002).

One of the characteristics of Roman baths was that public bathing was largely democratic and open to all, and promoted sociability and awareness of a broad community spirit (Yegül, 1992). To a great extent the baths also represented places where social distinctions broke down and social levelling occurred (Fagan, 1999).

3.1.2 Decline of bathing

Baths remained popular institutions well into late antiquity but during the general decay, and the eventual 5th Century AD fall of the Western Roman Empire, the teaching and practice of learned medicine suffered the same decline in their fate as literature, the arts and government (Loudon, 1997). For about five centuries, the Christian faith, carried along by the Catholic Church, permeated all aspects of life in the West. Christianity saw cleanliness and hygiene as highly suspect. Although, according to Dvorjetski’s review of Christian presence at the baths of the Eastern Mediterranean, the Church admitted bathing on medical grounds, it disapproved of mixed bathing and of the general atmosphere of pleasure and ‘consequent sin’ (Dvorjetski, 2006-2007). All this cleanliness was incomprehensible, and was considered a source of evil and promiscuity.

However, while bathing for pleasure was condemned, bathing as a medical measure was generally tolerated by the Church. It even placed some thermal springs in the class of hallowed waters endowed with supernatural healing powers (Dvorjetski, 2006-2007; Jackson, 1990; Křížek, 2002). In Europe, various religious establishments, cathedral schools and monasteries were often built near mineral springs that were said to have healing properties. It clearly did not escape the Church’s authorities that this

arrangement had the potential of providing good income for the Church. This practice was important in keeping medicine alive during what are known as the dark ages (Porter, 1999).

As the Church condemned public bathing (as immoral and sinful) as energetically as it condemned the theatre it also encouraged the closure of the many baths which had previously done so much to preserve public health in the large metropolises of the Roman world. Not only the spirit of the baths but also the structure of the magnificent buildings lost its significance, and the barbarian invaders of Italy let most of the Roman Bath go into ruins (Ashe, 1950). Living in filth was indeed considered by great numbers of holy men as an evidence of sanctity and many devout Christians abstained totally from bathing (Klebbs, 1917). In the late medieval Europe however, due in considerable degree to the influence of the Crusades, bathing very slowly regained popularity. The knights returning from the Crusades where they encountered the pleasures of hot baths brought this acquired taste for bathing back with them, and municipal baths gradually gained in popularity again (Schafer, 1956).

3.1.3 Bath and Bathing in Europe in the Middle Ages

The use of thermo-mineral springs for treatment and relaxation was slowly beginning to return. One reason was that for centuries physicians did not have much that was noticeably effective to offer their patients either for keeping or improving their health. The rich, including the many Crowned heads of Europe, were in the habit of employing numbers of physicians who, unable to do much else, often relied on tools that would at least not do any harm to their paying patients. Fresh air and baths, particularly when taken in thermal spring waters whose healing potential was based on the belief that they were able to balance the body humours and improve health, were one of the few options available (Porter, 1999; Thomson, 1978). However, while bathing for health

reasons seemed to be tolerated during this period, bathing for pleasure received a double blow in the late 15th Century. The spread of syphilis that had at that point taken Europe by storm coincided with the broader moral rigors of the Reformation and Counter-Reformation. As it was thought that bathing places were the key source of its progress, even more baths were closed (Klebbbs, 1917; Nolte, 2001). One positive effect of all this on the practice of medicine was that it marked the end of bathing as a relatively spontaneous activity and instead became increasingly a prescribed activity performed under meticulous and 'expert' medical direction (Porter, 1990).

3.1.4 Renaissance and the Rebirth of Bathing

It was not until the Renaissance that the rise in popularity of Balneotherapy really returned. This was due to several simultaneous factors. The Renaissance hunger for all things classical meant a rediscovery of many ideas from the classical period of Greece and Rome including ancient medical doctrines. In the wake of this, bathing as a suitable treatment for certain kinds of illnesses also experienced a revival (Cook, 1993). At the same time Gutenberg's invention of the printing press in the mid fifteenth century meant that information was disseminated much faster than before. The impact the printing revolution had on many aspects of life, including medicine, was enormous (Jackson, 1990; Palmer, 1990). All Galen's works originally summarized into Arabic, and later (11th Century) brought back to Italy, could be printed. They became the primary text taught in the medical schools that sprang up in Italy, France and the rest of Europe (Nutton, 1993). Many branches of medicine, including balneology, were revisited and brought into the mainstream of Renaissance medical treatment. Andrea Bacci in Venice in 1571 published his "De Thermis" in which he strove to teach the 'Art of the Baths' as based on Galen's teachings, an art that had undergone a long dark period of neglect. He also tried to show that taking the waters was not a matter of pure

empiricism but a discipline with its own rational institutes and doctrine – balneology (Palmer, 1990).

The next step in the development of balneology and Balneotherapy came with Paracelsus, the Swiss physician and the father of ‘chemical medicine’ (1493-1541) whose work made it possible to analyse the mineral content of the natural springs. Post-Paracelsus doctors were able to combine the chemical analysis data with their experience based on treating patients, and make more accurate connections between the compositions of various springs and their effectiveness against specific ailments (Frankel, 1986; Smith, 1987). This finally provided a rational base for the classification of healing springs and their use in medicine (Thomson, 1978), and often gave the individual spring an added air of importance as a curative agent.

The last years of the eighteenth century saw a new and significant change in European medicine. ‘Hospital medicine’ arrived with the birth of the first hospitals (Foucault, 1975). Until then medicine was patient-driven and referred to bodily attributes like vigour, suppleness or fluidity, i.e. subjectively judged attributes that were lost in illness and that medicine was trying to restore. The French Revolution reformed the institutions of medicine and firmly put hospitals, and doctors, into the very centre of the new system. This was based not on Galenic principles but on the provision of a diagnosis and the evaluation of therapy used (Bynum and Porter, 1993). By then bathing was back in favour again and as it was considered to be therapeutic, physicians began once more to recommend the use of water for the maintenance or improvement of health. Although medicinal spas were offering treatment based loosely on the teachings of Hippocrates and Galen they were now combining diagnosis with bathing and later with drinking of the mineral water which they supplemented with special nutrition, exercise, rest and massage.

Fresh, often mountain, air, beautiful surroundings and recreational activities were yet more pleasant 'extras' that further increased the popularity of spas. A further factor that had a profound effect on the rising popularity of spas in Europe was the increased safety for travel that arrived in the post-French Revolution and post-Napoleonic wars period. Safety and better opportunities for investment combined with building of railroads and increase in travel opportunities. Cure establishments mushroomed (Nolte, 2001). These included such famous places as Baden-Baden in Germany which, although dating back to as early as the 14th Century, in the late 19th Century saw a major program of enlargement and improvement of existing facilities. It subsequently became 'the place to be seen' for many European noblemen as well as artists and musicians. Queen Victoria, The Prince of Wales, Disraeli, Johannes Brahms, Victor Hugo and many others were frequent visitors (Sanner, 2000; Wechsberg, 1979). For the sophisticated Europeans of the 19th Century, a spa was much more than just a health resort or a place visited primarily for medical reasons (Rockel, 1986). Although there were many, especially tuberculosis sufferers, who visited spas on the recommendation of their physicians and who were hoping to improve their health (Lawlor and Suzuki, 2000), spas were often simply important centres of high society. Their popularity rose due to their offering of treatment without much pain or discomfort which made them eminently suitable mainly for the well-to-do patients suffering from obesity, gout and other disorders related to their over-indulgent way of life. Many spas became playgrounds for the rich (Croutier, 1992; Nutton, 2004; Thomson, 1978). In order to cater for the exclusive clientele spas needed more than medicine, they needed to keep their visitors from being bored. And so they started providing various forms of entertainment and opened galleries, theatres and concert halls, and even casinos. Many of the bathing places in France, Germany, the Austro-Hungarian Empire or Britain grew into popular and elegant social and cultural centres frequented by aristocracy as well as artists from musicians to writers or poets. In England, where the

spa fashion followed King Edward VII, many of his devotees accompanied him to Europe to places like Baden-Baden or Marienbad (Marianské Lázně in the present Czech Republic) near the western border of the then Bohemia (Schmitz, 1989; Wechsberg, 1979). Other popular bath resorts that attracted wealthy clientele were Bad Ischl and Bad Gastein in Austria, Lake Balaton in Hungary or Karlsbad (Karlovy Vary) in western Bohemia (Wechsberg, 1979). In this 'golden age' of European medicinal and pleasurable spas their availability gradually increased throughout the 19th century until eventually there were too many to survive (Croutier, 1992). With the change in the economics of over-supply many of the smaller European spas were forced to close (Sommer, 1999). Many have however survived and are still being used for both healing and recreation.

3.2 Japan- her medicine and mineral springs

Japanese medicine, just like many other medical traditions, is not wholly indigenous. It includes elements brought in from outside specifically from India, Tibet and south-east Asia but mainly from China (Mann and Lowe-Porter, 1999; Umesao, 2003). During the mass importation of Buddhism and culture from China in the 7th Century Japan imported a wide range of ideas, institutional models and techniques of production following which it witnessed major changes in just about every aspect of life. The new ideas covered everything from city planning to the system of government and the writing system as well as new medical practices that included the use of herbs and also acupuncture and moxibustion. These techniques gradually became incorporated into the accepted way of treating diseases which lasted for centuries to come (Jansen, 2000).

Our knowledge of the original Chinese medical practices that had a major effect on Japanese medicine comes from the oldest collection of short treatises on acupuncture

and moxibustion that are collectively known as 'The Yellow Emperor's Inner Cannon' (Hall, 1988; Shaughnessy, 2000). The emergence of these Cannons during the time of the early emperors of the Han dynasty (206 BC – AD 220) constituted the theoretical basis for 'high classical tradition of medicine' and the frame for all subsequent Chinese medical debate. The Cannons were studied and then practiced by learned medicine men most of whom were treating clients who usually came from the middle and upper strata of urban society (Mann and Lowe-Porter, 1999). Ordinary people had access only to folk or religious healers of whose practices and beliefs is known very little (Bray, 1993). Medical teachings were based on the Chinese physiological theories founded on the belief that the body represents a microcosm of the natural and social world. It was unimaginable to see the human body reduced to a system that exists in isolation from the cosmos (Bray, 1993). Chinese medical texts therefore described the internal body arrangement as based not on functions of the different organs but as containing the entire universe. The sun and moon, the stars and various constellations as well as various plants and animals all found their representations in the body (Shaughnessy, 2000). The theory of the state of health was dependent on the maintenance of internal bodily equilibrium and harmony which in turn was maintained by the proper circulation of the fluid substance called '*qi*', an active principle forming part of any living thing. *Qi* is frequently translated as life energy, life-force, or flow (Ho, 2000; Needham, 1956). Free circulation of this substance was considered to be essential for the maintenance of healthy balance between the different organs. *Qi* is very susceptible to diet, exercise, changes in climate and many other factors and therefore very important for the maintenance of health. As long as the '*qi*' was circulating normally through the body the person was enjoying good health. As there were many states *qi* could have ranging from the normal to the polluted, there were also many ways of achieving a healthy '*qi*'. These included temperate behaviour, proper diet, meditation techniques, exercise and bathing. Disorders were considered to be due to

the body getting out of balance and distorting the normal functions of the body fluids. This idea was similar to the Hippocratic/Galenic theory of the four body humours - blood, yellow bile, black bile and phlegm - discussed above, on which Western medicine was based for hundreds of years. It also stressed the importance of balance if a body was to function properly (Lock, 1980).

In more modern history i.e. during the more than 200 years of Japan's severely restricted contact with the rest of the world that started in the early 17th Century some aspects of European medicine did nevertheless enter Japan as part of the limited cultural interchange mediated by the Dutch. The Japanese in fact called any Western type of medicine *Rangaku* (or Dutch Learning) (Matsunosuke, 1997; Sakai, 1989). Dutch physicians who were working for the Dutch East India Company were allowed to practice and, to a limited extent, give instruction to a few Japanese doctors (Keene, 1969). Alongside the many European curiosities that entered Japan through Dejima¹² was the first western book of anatomy, the Dutch translation of "Anatomische Tabellen" written in 1731 by the German physician Johann Adam Kulmus (Hall, 1988). This textbook presented an altogether different view of human anatomical structures from the one described in the Chinese medical texts. A limited number of Japanese physicians were allowed to visit Deshima and there not just to learn from the Dutch physicians but even to practice western medicine (Bowers, 1970). In 1771, one of these visitors was the Japanese physician Sugita Gempaku who was able to be present at a dissection of an executed female criminal. As dissection was forbidden in Japan he had never before seen the inside of a human body. He recognized the discrepancy between what was depicted by the Chinese medical texts and what he saw in front of him, and became aware of the enormous significance of the imported Dutch anatomical textbook. He was so impressed by the accuracy of the anatomical diagrams that he

¹² An artificial fan-shaped island in the bay of Nagasaki. Used as a trading post by the Dutch it was the single place of direct contact between Japan and the rest of the world during the Edo period.

spent the next three years translating the book into Japanese. Sugita's translation was the outcome of enormous enthusiasm as he was handicapped by lack of official support and colossal linguistic difficulties. The eventual publication of *Kaitai Shinsho* or 'New Book of Anatomy' (解体新書) in 1774 was a major turning point in Japanese medical and cultural history which initiated a new way of medical thought in Japan (Jansen and Rozman, 1986; Keene, 1969; Kuriyama, 1992).

The late 19th Century's newly established Meiji government was aware of much of the progress many of the Western nations had made during the nearly 250 years of Japan's near seclusion that kept the country virtually closed to foreign influences. It realized that it needed to take enormous, and relatively fast, strides if it wanted to catch up with these developments. The Government therefore took an important step towards acquiring the necessary knowledge and in 1871 sent a large delegation, the so called 'Iwakura Embassy', on a tour of Asia, Europe and the United States (Jansen, 2000; Nish, 1998). With Prince Iwakura Tomomi, an important member of the government, at its head, the Embassy consisted of fifty top officials whose task was to explore various aspects of political, economic, and social institutions of the countries it visited, and on return to report on their findings to the Government. The group journeyed to the United States and eleven European countries, making thorough investigations into each country's politics, military affairs, trade and industry, education, and culture, and also science, including medicine. On their return these experts advised the Government on what they considered to be the best model to be used in modernizing the existing Japanese structures. One of their most effective recommendations was to recruit foreign specialist teachers. And as the late 19th Century German science, especially chemistry, was leading the world, it is not surprising that the Japanese experts chose German scientists and German doctors as their preferred specialists to re-structure the budding Japanese medicine. The influence of German doctors on

Japanese medicine however goes back to well before this ‘formal’ invitation. As early as the beginning of the 19th century the German physician Franz von Siebold (1786-1866) spent many years working for the Dutch East India Company on Deshima Island (Beukers, 1997). There, in 1824, he opened the first Japanese private medical school lead by a European, and taught around fifty Japanese medical students the basics of Western medicine (Beukers, 1997).

3.2.1 Development of post-*Meiji* medicine

The explosion of scientific and industrial activity in the years following the ‘opening of Japan’ in the second half of the nineteenth century included the opening of the Tokyo Medical College in 1877. The German influence was strengthened by the appointment of a German doctor, Erwin von Bälz (1849-1931), as the first professor of Medicine (Duke, 2009). The College formed a part of the newly created Tokyo University with its four faculties: law, medicine, literature and science (Jansen, 1980). At the same time von Bälz, who stayed in Japan for 27 years, the longest stay of any of the foreign government advisers in post-*Meiji* Japan, also took up the position of the personal physician to the Emperor, his family and some of the aristocracy (Bowers, 1980). He took an active interest in many aspects of Japanese life, culture and the physical environment of the country. He made numerous trips into the countryside, and in his diaries gave detailed accounts of his journeys, many of which included visits to *onsen*. Indeed he enjoyed visiting *onsen* so much that he purchased properties near several of the thermo-mineral springs locations. And, like many German physicians, he took a scholarly interest in spas that he considered to be more than simply enjoyable. They were supposed to play an important role in increasing the person’s power of resistance to diseases. Although he was mostly interested in effect on health of the hot springs themselves he also suggested that *onsen* worked because of the combination of the water and several complementary factors. The first, which he saw as beneficial, were

the beautiful mountainous locations of some of the springs but that was, in his opinion, followed by the positive effect the communal aspect of Japanese bathing had on the total experience. He liked the way the Japanese bathed together and thought that this sharing aspect of the experience was an important factor in the overall beneficial effect of the medicinal baths (Bälz, 1932).

In a speech given at the Tokyo Medical Congress in 1890 von Bälz explained his ideas on the treatment of tuberculosis, then a very widely spread illness and a major cause of early death both in Germany and Japan (Bowers, 1980; Lawlor and Suzuki, 2000). He stressed the importance of strengthening the body's resistance to illness and recommended *onsen* as ideal places for the use of preventive medicine and physical exercise (Bälz, 1932). In September 1904 von Bälz visited Kusatsu in the hills above Kyoto where the springs were used for medicinal bathing as part of the treatment of rheumatism, gout and syphilis (Martin, 1939). He advised the Kusatsu physicians to open a sanatorium there where soldiers who were then fighting in the Russo-Japanese war, and whom he considered to be in very poor physical state, could convalesce and regain their strength while returning their body into a better balanced state.

The exchange of doctors between Japan and Europe gradually not only increased but became a two-way process. German doctors come to work in Japan and some Japanese medical students were sent to Germany to learn new skills. Standards were high. Lafcadio Hearn, the 19th Century writer, journalist and eventually a teacher of English at Tokyo University, whose works offer invaluable glimpses into pre-industrial and *Meiji* Japan, commented on the high quality of those graduating from the Tokyo Medical College saying that "the German-speaking Japanese physician is not easily surpassed in his profession" (Hearn, (1898) 2005).

The 19th Century eager quest for all Western science and technology also marked the entry of cosmopolitan medicine to the world of Japanese medicine (Lock, 1997). It did not however mean that everyone was comfortable with the subsequent invasion of Western biomedical technology and that there was a blanket acceptance of this modernization. Japanese health care continues to be a pluralistic system that combines the multivariate approach of the traditional Japanese *kanpō* medicine that uses most of the Chinese medical system including acupuncture and moxibustion with elements of cosmopolitan medicine. As Japan does not adhere to the Cartesian idea of separation of mind and body it follows the approach to healing that takes a holistic view of the patient and involves looking simultaneously after the patient's physical, psychological and possibly spiritual needs (Lock, 1980; Lock, 1984). At the same time, as Lock points out, in classical East Asian medicine the patient, and the patient's family, should also assume considerable responsibility as only a small portion of the treatment is expected to be initiated by the doctor (Lock, 1978).

3.2.2 Japanese Baths and Bathing

No account of the development and current practice of Japanese medicine would be complete without serious attention being paid to the role of washing and bathing, which form a vastly important part of everyday life in Japan. These hygienic practices have to be repeated, usually daily, because the act of cleaning only works temporarily. The daily hygiene behaviour (taking a daily bath, taking off shoes, washing hands etc.) is closely related to Japanese spatial classification and its association with, among other things, dirt and cleanliness. The outside of the house – *soto*- is associated with dirt, and the inside – *uchi*- is the cultural sphere of healthy and clean things (Hendry, 1995a; Ohnuki-Tierney, 1998). The *uchi-soto* organization, as we will see later, operates on many levels as a general principle of Japanese society. It works like an axis along which wide range of social phenomena can be indexed including social distance, status or

relationships (Bachnik, 1994). Bathing in Japan, it seems, is as old as the history of the inhabitants of the archipelago. The very first mention of the Japanese people, written in China in about 297 A.D., already contained a reference to ritual bathing (De Bary *et al.*, 1958). The practice of bathing was also well-developed in Ancient China. According to Schafer numerous terms for various types of bathing existed already by the beginning of the Chou dynasty (about 1000 B.C.) (Schafer, 1956). There were several reasons for which the Japanese people bathed - for religious purification purposes, for cleansing purposes, and for therapeutic purposes (Clark, 1994).

Purification

In general bathing in Japan is concerned not only with the physical act of removal of dirt but also with the removal of spiritual and emotional pollution. The Japanese symbolic notions of purity and pollution are very strong and the role of water and bathing in purification, as Clark discusses, goes back to prehistoric times. He bases this on the fact that references to bathing and ritual purification in Japan were already mentioned in the 'Records of Wei', a Chinese document written in the third century AD i.e. long before the introduction of a writing system to Japan (Needham, 1989). These practices are also described in the ancient Japanese documents *Kojiki* (The Chronicle of Ancient Matters) and *Nihongi* (The Chronicles of Japan), the earliest known collection of Japanese legends and myths (Clark, 1994; Otsuka, 1998; Watanabe *et al.*, 2009). The mythical basis for purification in the Japanese religion of Shintō, in which the doctrine of uncleanness holds a prominent position, can be found in the story of the God Izanagi who purified himself at a river-mouth where the waters emptied into the sea. He had been to the underworld and therefore in contact with death, which in Shintō represents one of the many forms of pollution. He therefore needed to undergo a ritual of purification which was performed using water (Floyd, 1965). Written in the eighth century, a number of the *Kojiki* myths mention numerous Gods who, following an encounter with pollution, cleanse themselves by bathing. Belief in ritual cleansing -

misogi- and the importance of daily water ablutions based on the water's power to wash away impurities as well as physical dirt, are ideas that feature prominently in Shintō (Genchi, 1926; Ohnuki-Tierney, 1998; Philippi, 1969). The main rituals in Shintō centre on the concepts of *tsumi* (impurity) and its removal by *oharai* (purification). *Tsumi* has a broad range of meanings including pollution, sickness or disaster. In the Shintō order of things, certain situations or circumstances like death, injury, disease, menstrual blood, childbirth, 'people dirt' or *hitogomi* (crowded) or the underworld are regarded as polluting (Hendry, 1995a), and evoke a strong sense of avoidance, fear and mystery followed by discrimination and rejection (Clark, 1994; Namihira, 1987; Ohnuki-Tierney, 1998). This pervasiveness of the sense of pollution leads to the notion that pollution should be avoided wherever possible. If encountered, however, it should be removed by ritual purification or '*harai*'. This removal can take one of three forms. It can be performed by a priest using a staff with paper streamers that is symbolically waved over the place or the person to be purified, it can be in the form of *misogi* which involves purification with water or salt, or one can also use *imi*, that is avoidance of certain words or actions (Picken, 1994). Water's prominent position in Shintō's rituals can also be detected from the fact that Shintō shrines were traditionally located near some form of moving water be it a river, mountain stream or the sea (Aston, 1907; Nelson, 2000).

Cleansing

Keeping (or reaching) a state of cleanliness and absence of various types of pollution is greatly helped by Japan's natural wealth of thousands of thermo-mineral springs found all over the country. Within Japanese society where actual personal dirt is obnoxious to the gods (Aston, 1907) spring water is within easy reach of most people making it almost effortless for all Japanese to perform their daily cleansing rituals. Comments on the remarkable level of Japanese cleanliness can be found already in the diaries that were kept by some early European travellers to Japan. They show how surprised these

travellers were by the acts of cleansing they witnessed on their visits. William McOmie in his 'Foreign Images and Experiences of Japan' (McOmie, 2005) lists a number of the early naturalists and physicians who travelled in Japan prior to the Meiji Restoration in the 19th Century (pre 1868) many of whom commented on the importance of bathing for the Japanese, and the way this was performed. Engelbert Kaempfer (1651-1716), who entered Japan via Nagasaki in 1690 and spent two years travelling around the country, gave very detailed accounts of daily life of the Japanese. In these he included many comments on the bathing practices (Kaempfer and Bodart-Bailey, 1999). Kaempfer's accounts of Japan stimulated interest in things Japanese, and encouraged others to visit the country. Indeed the German physician Phillip Franz von Siebold, a man already mentioned as being of prime importance in the development of modern Japanese medicine, was one of those whose interest was aroused by Kaempfer's writings (Sakai, 1989). The Dutchman Johannes Frederik van Overmeer Fisser (1800-1848) also expressed his amazement at the behaviour of the porters who carried him and his companions during his travel in Japan. He observed that as soon as they arrived in their lodgings all the porters bathed. Fisser uses the words 'almost obsessive cleanliness' as this practice which was quite unlike anything done by the Europeans of the time (McOmie, 2005). McOmie also mentions several other early travellers who were impressed by the ritualistic way the Japanese people bathed, e.g. Joao Rodrigues, who arrived in Japan in 1577, and who apparently considered the Japanese to have 'developed the art of bathing to the highest degree among Asians'. Alcock (Alcock, 1861), who travelled around Japan in the eighteen sixties referred to the Japanese as 'a race of bathers' and 'models of cleanliness', and compared them to the Romans in their love of every form of mineral bath. He also pointed out that when they stopped for the night "a bathroom may invariably be counted on". Some of these early travellers also mentioned encountering '*onsen*', and the effects bathing in the hot mineral springs had on their feeling of general wellbeing.

Therapeutic baths

Besides its purification and cleansing properties a hot bath in Japan was, and still is, also considered to be a possible mode of treatment of injuries and certain types of disorders (Butler, 2005; Clark, 1994). Bathing in a hot spring is often used in an attempt to drive out offending material from the body (Lock, 1980). References to the healing properties of Japanese springs, and to their use in Balneotherapy, can be found in countless sources, some of which go back centuries. According to *Nihon Shoki* (Chronicles of Japan), the Emperor Jomei (593-641) made repeat visits to Arima *onsen* that lies in the outskirts of the modern city of Kobe. These excursions were for recuperative purposes, and the Emperor's visits ensured Arima's reputation as a good place to rest and recover from fatigue or illness that has lasted to this day (Graburn, 1995; Guichard-Anguis, 2002). There are references to other Emperors, warriors and courtiers that found opportunities to visit not just Arima but also Atami (another popular *onsen*) for bath therapy (Butler, 2005). Adam Laxman, who in 1792 headed the first Russian diplomatic mission ever to be sent to Japan, came across hot springs that were "very curative, since people bathing in them very often obtained relief from various ailments" (McOmie, 2005). Alfred Martin's study of Japanese baths and bathing lists several *onsen* with waters that have "healing properties" e.g. Beppu and Kusatsu (Martin, 1939). The latter of these he described as having "very hot acid water" which was used in the treatment of rheumatism, gout and syphilis.

It was not exclusively foreign physicians and travellers who interested themselves in *onsen*. Amongst others Mestler mentioned Shūtoku Kagawa (1683-1755) who in 1738 published work that discussed the therapeutic value of *onsen* waters. Kagawa also made suggestions as to what should be considered as the optimal length of time necessary to obtain the full benefit from the stay. His recommendation was for a period of 21 days (Mestler, 1954).

The locations in which springs which were believed to have healing powers gradually became popular destinations of travel for many people even at a time when travel was not freely allowed. The *bafuku*¹³ military government imposed severe restrictions on movement of people. Anyone wanting to travel needed to obtain a permit prior to departing. These could only be given for a valid reason. According to the works of Creighton and Graburn the most commonly issued travel permits were for pilgrimages to temples or shrines. They were also however given for trips to therapeutic hot springs whose importance in providing some relief from the stressful daily life most of the peasants led was thus recognized (Creighton, 2009; Graburn, 1988) . One of the ways *onsen* were used and enjoyed was, and for a minority of people still is, for *tōji* (湯治, or water-based self-prescribed healing.

Tōji (湯治), or water-based self-prescribed healing

Tōji is a period of rest, relaxation and recuperation traditionally undertaken by farming families at the end of the agricultural year (Agishi and Ohtsuka, 1995). Tired after the rice harvest peasants would spend a few weeks in an *onsen*, staying in cheap *ryokan*, resting and taking healing baths (Takei *et al.*, 1989; Uchida, 2008). Guichard-Anguis, looking at one of the oldest Japanese *onsen*, Arima *onsen* in Hyōgo prefecture, also describes this practice as recorded by a monk of the Shōtoku temple in Kyoto as early as 1452. One of the things he remarked on was the set lengths of stay that was recommended for maximizing the positive effect of taking the baths i.e. *hitomawari* (a stay of one week), *futamawari* (a two-week stay) or *mitsumawari* (a three-week stay) (Guichard-Anguis, 2002). This last of these recommended periods of stay in an *onsen*

¹³ Shogunal government during Edo period (1603-1867).

continues to this day to be the norm in Japanese hot spring-based therapy (Agishi and Ohtsuka, 1995).

Tōji was however more than the simple taking of baths in *onsen* waters, relaxing in pleasant surroundings and recuperating. Uchida and her group based in Rikkyo University in Tokyo are researching the historical and cultural aspects of spa culture during the Edo period¹⁴. They have looked at the behaviour of *tōji* participants and the range of activities that took place during *tōji* in the area around Hakone, an *onsen* about 60miles distant from Tokyo. She found a register of Hakone *ryokan* guests which started in 1644. It contains entries commenting on how happy the visitors were to have used the hot springs and how well they felt as a result of it (Uchida, 2009). She then looked at the reasons for these feelings and asked if it was the bathing alone that was exclusively responsible. She discovered that, on the contrary, taking baths and resting was just one of several reasons for the feeling of well-being. People took part in many other activities which may have contributed to their positive attitude. Figure 1 shows some of these activities.

¹⁴ 1603-1868 when Japan was ruled by the Shoguns of the Tokugawa family.

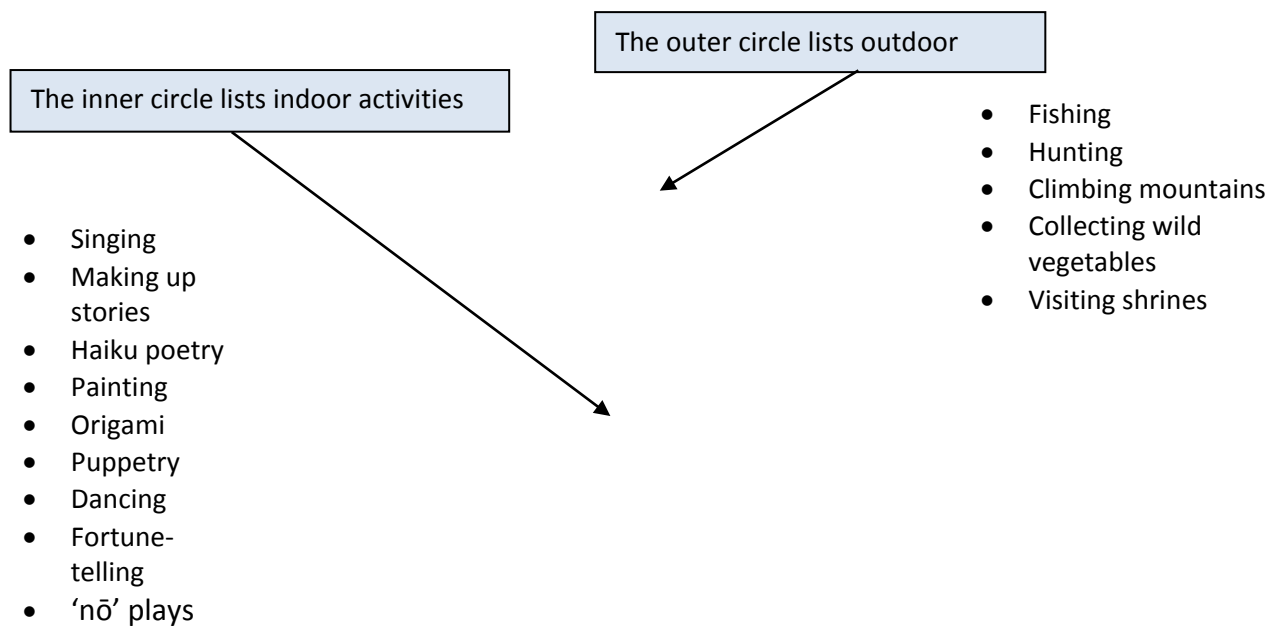


Figure 1: Activities performed during *tōji*.

It seems that, according to this work, during the Edo period there was a considerable amount of social life connected with *tōji*. This was the peasants' time away from their usually hard life and they expected not only to rest but also to enjoy themselves. They engaged in singing and playing of games like 'go'¹⁵, they went fishing and boating, there was dancing, and men took part in small parties where alcohol was taken. Sometimes people even got together to put on small performances of 'nō'¹⁶ plays to be enjoyed by those present at the *onsen* at the time. People went shopping together, visited temples or shrines or got together to make things e.g. *origami* (Uchida, 2008).

¹⁵ Japanese board game of strategy.

¹⁶ A major form of classical Japanese musical drama that has been performed since the 14th century. Many characters are masked, with men playing both male and female roles.

As *tōji* was undertaken by most families at the same time of the year every year, usually after the rice harvest, there was a high probability that the same people would be staying at the *onsen* at the same time. This led to their making new ‘friends’, although this friendship was almost certainly temporary and entirely confined to the times they spent together in the *onsen* (Uchida, 2009).

3.2.3 Modern Japan

Japan has about 24,000 mineral springs of which 11,700 have temperatures above 42°C, and some even above 100°C. Around 2,500 of these are currently used as *onsen* resorts offering bathing and entertainment facilities, although some are also combined with medical establishments providing treatment based on the properties of the *onsen* mineral water. *Onsen* are immensely popular as places of relaxation and pleasure (Graburn, 1995; Guichard-Anguis, 2009a; Guichard-Anguis and Moon, 2009). The number of guests that annually stay in hot spring resorts rose steadily throughout the eighties until they reached a peak of around 140,500,000 in the prosperous nineties. That meant that, on average, every Japanese spent more than one day in an *onsen* resort (Agishi and Ohtsuka, 1995). Since then, although there has been a slow decline to 137,100,000 in 2005¹⁷, *onsen* tourism that offers short-term event-oriented travel remains popular (Arlt, 2006). These numbers however refer mostly to the number of tourist or visitors, i.e. people who come to *onsen* for relaxation. They are able to choose any of the thousands of spas on offer, stay as long as they wish, take baths and drink the mineral spring water without medical supervision of any sort. This type of self-selected spa-based rest/treatment is fully paid by the visitors and is not covered by medical insurance as is the case with hospitalized patients (Agishi and Ohtsuka, 1995). The current practice of Japanese Balneotherapy that takes place in *onsen*-based hospitals using local *onsen* water and that is the focus of this study deals with

¹⁷ <http://www.onsen-japan.info/data/>

hospitalized patients. It is conducted by physician-balneologists and it combines the 'traditional' use of *onsen* for relaxation and healing with the medical use based on European theory of balneology. The main method of treatment is the frequent taking of natural mineral baths in combination with other types of procedures like physiotherapy, application of hot mud, doing gentle exercise and eating a special diet. The most common length of time that is considered beneficial for the body is three weeks (Agishi and Hildebrandt, 1989). The purpose of Balneotherapy in Japan is increasingly seen as one of rehabilitation and prevention of geriatric disorders as well as health promotion and palliative care. Currently there are about 90 hospitals in various spa stations, including five branch hospitals belonging to various National Universities that offer lectures on medical balneology as an optional specialist subject. The biggest of these is the Medical Institute of Bioregulation of Kyushu University in Beppu *Onsen* that specializes in using Balneotherapy for cardio-vascular diseases and rheumatoid arthritis. Misasa Onsen hospital, where this research is based, is a branch of Okayama University Medical School. It provides not only a clinical facility but the physicians are also involved in carrying out research into various aspect of Balneotherapy (Mitsunobu, 2000; Watanabe *et al.*, 2009).

3.3. Czech medicinal spas

Although, according to historians of Czech medicine, the cultural history of Czech spas is not as old as that of spas of southern Europe and the Mediterranean basin (Dvorjetski, 2001-2002) or of Japan (Clark, 1994; Graburn, 1988; Guichard-Anguis, 2002) it occupies an important place in the history of European Balneology (Křížek, 1990). Western Bohemia in the Czech Republic is one of the European areas showing a high concentration of thermo-mineral springs that are used for spa therapy (Lund, 1990). Spas found here, e.g. Karlovy Vary (formerly Karlsbad), Mariánské Lázně (Marienbad), Františkovy Lázně (Franc Josef's Bad and Jáchymov (Joachimstahl), are all

located along the course of the river Teplá ('warm' in Czech). The area, geologically known as the Bohemian Massive, is rich in natural springs of differing temperatures (Lund, 2000). The warmest spring with temperature of 72°C is in Karlovy Vary while Jáchymov's spring waters only reach temperatures of just above 30°C (Myslik and Stiebitz, 2000). Other associations with the local thermal sources are reflected in some of the local names. Teplice (meaning a warm place) and Vary (boiling point), the old spelling of Vary as in Karlovy Vary, already appear on maps by J.C Cringer from 1568 (Křížek, 2002). Karlsbad's history as a spa town goes back to the 14th century when the Czech King Charles IV, discovered a hot spring here while hunting. He subsequently visited the spa many times for treatment and relaxation (Burachovič and Wieser, 2001; Křížek, 2002). Waters of the local mineral springs differ not just in temperature but also in composition, and vary from waters of the 'Karlsbad type' i.e. oversaturated with carbon dioxide occurring at Karlovy Vary and Mariánské Lázně, to the thermal waters with raised levels of radioactivity that occur at Jáchymov (Lund, 1990).

Water-based treatment of diseases that is offered to sufferers in these spas has undergone a series of changes over the past several hundred years. Until the late 16th century what was recommended was prolonged bathing in the spring water, frequently up to ten hours a day. This was supposed to open the body pores and allow harmful body substances to flow out. This is yet another example of one of the few medical interventions available to doctors i.e. purging of harmful substances from the body. It was unfortunately often accompanied by various problems the most common being severe skin irritations (Křížek, 2002). Following the work of Paracelsus in the 16th century, drinking '*kur*' (treatment) started to be used not as a substitute but as a complementary part of the treatment as a whole. An important contribution to the fame and prosperity of many of the spas mentioned here, but mostly to Karlsbad, was made by Dr. Becher who first of all carried out a chemical analysis of the waters and

then suggested an alternative way of using it in therapy. He reduced the amount of the time spent bathing, encouraged drinking cures and advocated gentle physical exercise, e.g. walking, as an important part of the cure. This new regime was a much more acceptable and indeed pleasant way of restoring one's health, and it resulted in a significant increase in patient numbers which was followed by an increase in the number of spa towns in the area. During the 18th and 19th centuries, or the 'golden age' of European spa medicine, West Bohemian spas became very popular, and to be seen in one of these spas became a hallmark of social status (Sárová, 2006). They were visited not just by thousands of ordinary patients but also by many Crowned Heads of Europe e.g. the Prince of Wales, Peter the Great and King Wilhelm of Prussia, and well-known personalities from Chopin and Goethe to Karl Marx (Křížek, 2002; Sheasby, 2001; Wechsberg, 1979). The rising commercial competition between the many spa towns led some of them to employ top architects to design often opulent municipal buildings as well as hotels and parks. Beautiful ornate colonnades and summerhouses that housed some of the many springs available were built to encourage patients to walk between the different springs (Burachovič and Wieser, 2001). Many of these buildings have survived to this day and add now, as they did then, to the relaxed spa atmosphere. An important role in the expansion of the numbers and sizes of spas was played by the aristocratic families who owned the land the spas were built on, and who derived a certain amount of financial benefit and social prestige from these enterprises. But the aristocracy was not the only part of the society to benefit financially. The Catholic church also supported the 'magical' healing springs both for ideological and commercial reasons as is witnessed by the many chapels, monasteries and places of pilgrimage that were built in the vicinity of many, but not all, springs (Křížek, 2002; Myslil and Václ, 1966).

From 1620 for the next 300 years Western Bohemia was, just like the rest of the Czech lands, ruled by the Austro-Hungarian dynasty. The official language was German and

German-educated doctors were working as physicians in the local spas, including Jáchymov. The arrival of balneology as a taught branch of medicine, however, had to wait several centuries (Božíková, 2004). It was not until the second half of the 19th century when the tremendous growth of the popularity and accessibility of spas all over Europe resulted in the teaching of balneology at many universities. The first lectures at Charles University of Prague on the subject of balneology were given in German in 1842, the year in which Josef Löschner, the founder of the first children's hospital in Prague, became the first professor of Balneology at the University. He gave a five-months long course of two lectures a week in balneology entitled 'Heilquellen Lehre' (Lectures on Healing Springs) (Hlaváčková, 1984).

Ownerships of spas in the Czech Republic determined not only the way spas were built but also how they were managed. Some, like Karlsbad, were property of the town itself but some were for generations owned by noble families who owned the land a spa was built on and could therefore influence decisions concerning the running of the spa (Křížek, 2002). The end of World War II and the country's subsequent move to socialism heralded major changes. All private property, including all spas, was nationalized. The Czech economy between 1948 and 1989 was very weak and consequently many enterprises, including spas, were gradually allowed to be run down. The West Bohemian spa region was at the same time under a much bigger threat posed by the exploitation of two natural resources. The first was brown coal that was being mined in open-cast mines without any attention being paid to the long-term environmental damage this was going to cause. The second natural resource was uranium that was mined until 1961 firstly by German Prisoners of War and later by thousands of so called 'Political' prisoners many of whom lost their lives there. The results of these two activities were predictable; one being the negative environmental impact and the other the huge decline in the numbers of Jáchymov's spa visitors. Many

of the smaller establishments were gradually run down or forced to close. Fortunately for today's spa users spas were re-privatized after the 1989 so called 'Velvet Revolution, and those that survived the years of deterioration are slowly returning to their previous glory (Burachovič and Wieser, 2001). Nevertheless they have had to revise their state-dependent management practices and face the realities of the new market-based economy. It remains to be seen if they can all survive the greater degree of accountability that private ownership necessarily imposes on them. According to the review by Sárová there are currently 33 spa towns with a total patient population (2005 figures) of 310000, of which 38% are foreign patients (Sárová, 2006).

3.4. Radon and its role in healing

Jáchymov's and Misasa's springs are characterised by the presence of radon gas. Radon, the heaviest of all the gases, is a decay product of uranium. It is a chemically inert naturally occurring gas that exists in soil and seeps into the air. It accounts for more than half of natural low-level background radiation, the amounts differing enormously depending on the underlying geology of the area. Itself a decay product of uranium it decays further into other radioactive species. Radon has a very short half-life and most inhaled radon is rapidly exhaled (Copes and Scott, 2007; Darby *et al.*, 2005; Erickson, 2007b; Weinstein, 1988).

Currently there are two schools of thought on radon's effects on health. On the one hand in both the popular and scientific press it is often referred to as "a well-established human carcinogen" (Baysson and Tirmarche, 2004; Catelinois, 2006; Wilcox, 2008). This view of radon is supported by many studies that show that a long-term exposure to elevated levels of radon concentrations can be linked to increased lung cancer risk. This is especially important in situations where radon gas exposure is combined either with smoking (Catelinois, 2006; Copes and Scott, 2007; Darby, 2007;

Samet, 1989; Vanmarcke, 2008) or with the presence of arsenic dust which is common in some environments encountered by miners in certain types of mines (Tomášek *et al.*, 1994).

The British Government's official advice given by the 'Health Protection Agency' states that there is a "very strong scientific evidence" that even at low doses the energy from radioactive material (radon) can cause mutations which puts the cell at greater risk of being triggered to become cancerous in the future. It therefore increases the chance of cancer development, usually after many years of exposure¹⁸. As Darby points out however there are enormous uncertainties connected with some of the data collection procedures, e.g. the recorded causes of death, coming from many of the mining studies on which most of these conclusions are based are not accurate enough (Darby and Inskip, 1995) .

In many European countries and in Japan, on the other hand, radon is also seen as an analgesic and an anti-inflammatory, and radon-based therapy is recommended by its proponents as a suitable therapy for management of chronic pain. It is commonly used in the treatment of mainly chronic and painful inflammatory disorders of the joints, most notably rheumatoid arthritis, but also in the treatment of asthma and bronchitis (Erickson, 2007a; Franke *et al.*, 2000). Patients in special clinics and spas are, under the medical supervision of specialist balneotherapists, exposed to radon therapy that includes bathing in the natural mineral water containing radon, or inhalation of radon-rich steam. Of the spas that use radon two are the ones considered here – Misasa Onsen and Jáchymov. Other well-known European 'radon' spas are Bad Schlemma in Germany or Bad Gastein in Austria, the latter a popular spa and a convalescent centre that has been used for the past six hundred years. Wechsberg in his 'The Lost World of

¹⁸ Health Protection Agency; 4th September 2008.

the Great Spas' (Wechsberg, 1979) however points out the uncertainties connected with Gastein's radon-based therapy. He quotes what he calls 'wise' doctors who are cautious about sending their patients to be exposed to the 'powerful radon emanation' and who say 'When in doubt, don't go there'. This he contrasts with Bad Gastein's own physicians' claims about the success of the therapy in prevention and treatment of many illnesses. He therefore concludes that the main thing in coming to a radon spa is 'to believe' in the therapy.

Radon-based therapy is also found in the United States where it exists in the unconventionally run Montana 'Radon Health Mines'. These are disused mine shafts full of radon gas which are open to users to come and spend as long a time there as they wish. This setup enables any exposure to radon to be a self-administered treatment undertaken without any medical supervision (Erickson, 2004; Erickson, 2007a).

There is some doubt as to the precise involvement of radon in healing. To be able to define the paradigm used by balneologists working in radon-rich spas the following section gives an outline of the two opposing theories of the effect of radon on the body. These are the Linear-No-Threshold theory and the theory of Hormesis.

3.4.1 Dose Response Theories

Linear-No-Threshold Theory

There are two theories that are used to explain the effect of radon on the body. These are the Linear-No-Threshold theory (LNT) and the Hormetic Dose-Response theory. This first of these postulates that a response to the introduction of a toxin is the same per unit dose regardless of the total dose (Darby, 2007). This means that any amount of a toxin, however small, is dangerous and will have a negative effect on a living

organism (Darby *et al.*, 2005; Gray *et al.*, 2009; Menzler, 2008). The LNT theory dismisses any suggestion that the body is able to adapt to low levels of toxin. Despite its clear dominance, this model has been receiving strong challenges, most notable from the hormetic dose-response model (Calabrese and Baldwin, 2003; Luckey, 1996).

Radiation Hormesis

The alternative view of the effects of radon is based on the theory of radiation hormesis which claims that low-levels of radiation cause not only an adaptive but even a positive response of the human immune system. Hormesis theory claims that the introduction of low doses of a harmful agent has a stimulatory or otherwise beneficial effect (Calabrese and Baldwin, 1998; Franke *et al.*, 2000; van Wyngaarden and Pauwels, 1995).

The original work on hormesis came from pharmacological studies that looked at the body's response to an introduction of low levels of toxins. Some of these studies showed that the scale of any physiological response that occurs at low doses cannot be anticipated by extrapolation from toxic effects noted at high doses (van Wyngaarden and Pauwels, 1995). Coming from the Greek verb "to excite" hormesis involves non-linear, biphasic adaptive dose response to a small dose of toxin. Living organisms function in a dynamic equilibrium state called homeostasis which becomes perturbed by the introduction of a toxin. This causes stress (and damage) to the organism which in turn triggers it to respond adaptively by stimulating the organism's protective responses against this stress. These responses may bring about DNA repair mechanisms, stimulate the antioxidant prevention of DNA damage, enhance the immune system and increase the body's resistance to the possible mutagenic effects of subsequent high dose exposures (Calabrese and Baldwin, 2003; Franke *et al.*, 2000; van Wyngaarden and Pauwels, 1995). The original idea was taken up by those who were looking at specific effects of radiation and incorporated into the theory of radiation

hormesis. This claims that the body's response to low levels exposure to radon cannot be estimated by extrapolation from the harmful effects of high doses found in the survivors of atom bombs or explosions at nuclear power stations.

There is some evidence that a small amount of ionizing radiation-induced cell damage stimulates the body's protective activity. Parsons bases his support for hormesis on evolutionary biology and suggests that in a given environment (high background radiation levels in this case) Darwinian natural selection will always favour maximal fitness of organism i.e. they will adapt to the situation in order to survive (Parsons, 1992). Lung cancer mortality in the United States is lower in counties with elevated radon concentration in the homes (Cohen, 1991). Van Wyngaarden's review article (van Wyngaarden and Pauwels, 1995) quotes Canadian and British studies that looked at the mortality rates due to cancer in workers in nuclear power stations. They found levels significantly lower than expected. Studies have also been carried out by researchers working in the Okayama Medical School in Japan who looked at the incidence of cancer in the citizens of Misasa Onsen with its higher than the national average background radon radiation. Yamaoka's group found that cancer levels were lower than would be expected (Yamaoka *et al.*, 2005). A group led by Weimin did a long term study (mean length of 14 years) of two groups of the local population that live in two locations in the village that are characterized by very different amounts of background radon gas (20 Bq/m³ and 60 Bq/m³ respectively). They found no difference between the groups in the mortality rates for all cancers they looked at with one exception. This was the raised level of lung cancer in men, which may however reflect the very much higher level of male smoking which the study admitted that it did not record during their data collection (Weimin *et al.*, 1998).

3.5 Other factors affecting the lived experience of medicinal spas

We have seen that throughout history spas (or in Japan *onsen*) have been used for relaxation and for healing. The relaxation side of spas is nowadays within reach of many people and spending time in 'wellness' spa has become very fashionable (Sárová, 2006). This popularity reflects what most spas visitors have found i.e. that even a brief stay in a spa increases their feeling of well-being (Klieber, 1993; Křížek, 2002; Thomson, 1978). Weekends were busy in both spas as they filled up with visitors who mostly came to use short-term relaxation 'packages' specially designed to relieve stress and promote relaxation. Unlike medicinal spas, wellness spas do not use medical procedures and so any of the positive effects that are felt after a brief stay in a spa have to be caused by other factors. Some of these factors most likely play a role in the outcome of stay both in the wellness and the medicinal spas as they are often found in the same physical location and differ only in the presence or absence of treatment and the type of establishment that provides these. What are these factors? Before they can be analysed in terms of their construction and working they will first be described here.

Although the area explored here is what patients experience during their stay in a medicinal spa there are some processes, e.g. the planning and the preparation for the spa episode, that are related to the actual stay but that happen outside this narrow period of time. As they influence the patients' feelings about spa therapy and thus affect the reported outcome they should be included in the overall constructed experience. These are made up of many small elements e.g. making domestic arrangements for the period of the person's absence, selecting, or perhaps even buying, suitable clothes or some women even have their hair done just before coming (Ellis and Bochner, 1996). When we include all these elements then a stay in a medical spa can be viewed as being analogous with 'the festas' in southern Italy portrayed by Gavin Maxwell in 'The Ten Pains of Death' (Maxwell, 1986). He regards a festa to be

not just the sum of the organized activities going on during the festa itself but as “three different things – the attitude towards it, the preparation for it and the festa itself”. In the same way spa therapy covers the patients’ expectations and beliefs i.e. their attitude to the therapy, the preparations preceding the therapy and finally the therapy itself.

3.5.1 The social and cultural dimensions of the experience and meaning of illness

While trying to understand the role of culture in the process and outcome of spa therapy we have so far examined the physical, historical, and physiological aspects. We shall now look at the effect of specific cultures on the healing process that takes place in a spa. We will consider the mind-body interaction and look at the part played by the participants both as individuals and as potential members of the spa community. We will refer to factors like the reported feelings about nature and the environment, spiritual associations with ‘healing’ springs that may exist, and the role of the various diversions offered by some spas in the individual’s experience. The effect the temporal, and often spatial, separation from normal life has on the behaviour of patients and on their possible incorporation into the temporary community that may or may not exist within the two medical establishments studied will be discussed in the final section.

Nature

Nature and the beauty of the environment surrounding spas have throughout history been seen as greatly contributing to the effectiveness of spa therapy. These features were already appreciated by the Greeks and the Romans (Dubos, 1968; Dvorjetski, 2007; Porter, 1990). In Japan the closeness of spring baths to nature enhances the users experience of bathing in *onsen* water and after healing and pleasure is one of the main reasons given for visiting *onsen* (Guichard-Anguis, 2009b; Moon, 1997). Because so many onsen are found in beautiful rural areas a visit to an *onsen* often connects the Japanese love of nature with the ubiquitous term *furusato*. It literally means the ‘old

village' but combines the natural beauty represented by forested mountains, meandering rivers and clusters of old farmhouses with a desirable lifestyle aesthetic (Creighton, 1997; Graburn, 1988; Graburn, 1995; Ivy, 1995; Moon, 1989; Robertson, 1988; Robertson, 1991). It satisfies the feeling of nostalgia for the lost past that followed the boom years of the 1980s and is associated with words like *shizen*(nature) and *yama* (mountain), but also with *ryōshin* (parents) or *haha* (mother) (Creighton, 1997; Robertson, 1988). And it is also understood as a place where it is possible to find aspects of 'pre-industrial agrarian heritage'(Creighton, 2009), a place not contaminated by Western influences. It is not limited to an actual place but is rather everything the modern suburbs and metropolis are not (Robertson, 1988).

Spiritual associations

The location of many ancient spas suggests that nature and beauty were always given an important place in supplementing the effect of healing springs and enhancing the spa experience. There were however other, more important, factors. The Greco-Roman medicine was based on the empirical knowledge of effective procedures and, at the same time, on the beliefs in magical influences (Dubos, 1968; Dvorjetski, 2007). Images of deities were found in most Roman places of therapeutic bathing, and in the bathing places the Romans built during the expansion of the Roman Empire. They established baths wherever they went and associated their so called 'healing' springs with Greco-Roman deities. Following the fall of the Roman Empire these deities were often combined with a parallel deity of local repute thus keeping the spiritual associations between the gods and the healing properties of the water. At the healing springs at Aachen, for example, the local god Granus was associated with Apollo, and at Bath the goddess of learning Minerva was combined with the local Celtic goddess Sulis into a compound goddess Sulis Minerva thus continuing the strong spiritual association with Bath's mineral baths (Dvorjetski, 2001-2002).

In Japan, the image of *Yakushi Nyorai* or the Buddha of Healing who will be described in detail in Chapter 4, offers medicine and help to people suffering from illness, and grants nourishment to the mind and the body (Suzuki, 2012). He is often found near natural mineral springs. Misasa Onsen has collected all the original statues of Yakushi that used to be found in the old public baths or *sentō* and, in order to stop any further damage to these fragile images, put them into a purpose-built house located in the centre of the village (See Fig.13, page 115). Lafcadio Hearn also mentions *Yakushi* in connection with his beloved Matsue, a town not too distant from Misasa, where *Yakushi* is seen as the Physician of Souls and also one that returns sight to the blind (Hearn, 1997).

Earthly diversions

Various diversions have throughout history been offered at spas, adding an element of enjoyment. These include basic activities like the consumption of food and drink that were sold in the baths or the opportunity to hear music. Many places also offered gambling (Dvorjetski, 2007) as well as prostitutes of both sexes (Dvorjetski, 2006-2007; Jackson, 1990; Yegül, 1992). During the 19th Century height of spa popularity in Europe most of the same diversions were common in numerous European spas. Eating and drinking, gambling and prostitution, dancing, going to concerts and visiting art galleries were all activities available to visitors of most European spa locations (Křížek, 2002; Porter, 1999; Sanner, 2000; Veselovský *et al.*, 1997; Wechsberg, 1979). And these activities were supported by all the parties concerned. The medical profession supported them because they were considered to be making an important contribution to the overall success of the various spa therapies. The towns supported them because they were bringing in large numbers of users and thus helping the local economy, and the users supported them because they added to the pleasure of their spa experience.

Play

Patients taking part in this study usually arrive in the spas on the recommendation of their physicians and in search of treatment for specific complaints. They leave behind their home environment, their families and their work and travel to a different, usually distant location. In this new environment, i.e. a medicinal spa, individuals merge into a new social group represented by the cohort of patients that are being treated in the same medical establishment at the same time. This new society is characterised by certain temporary identity, intimate behaviour or even a sense of fellowship (Raveri, 2002). Membership of such a society requires various behavioural adjustments on the part of the patients which will help them to accommodate the special characteristics of such a society.

Having freed themselves from dealing with everyday problems the spa patients have stepped outside the context that usually constrains their actions and entered into a different reality delimited in time and space and that allows them to take part in other, often playful, activities (Cox, 2002). Bateson extends this idea beyond the spatial and temporal boundaries and includes the psychological frame of such a situation. He concentrates on the messages that are included, or excluded, during these activities, and suggests that what denotes the action of play within a certain situation is the sharing of messages of mutual relevance and ignoring those on the outside (Bateson, 1983).

Play as introduced in the works of Huizinga, Hendry, Turner, Linhart and others (Hendry and Raveri, 2002; Huizinga, 1949; Raveri, 2002; Turner, 1983), especially play as considered as a state of mind, attitude or a disposition also signifies, among other things, negation of outside context. The accompanying joy that is inextricably bound up with playing can turn into elation (Huizinga, 1949). According to Huizinga playing is

different from ordinary life; it is a voluntary activity, an 'intermezzo, but if done regularly it is then a complement to and an integral part of life (Huizinga, 1949). It also includes elements of taking risks as well as one of seriousness and effort. Kelly uses *karaoke* in Japan to show that using play also includes serious traits (Kelly, 2002), while Rodriguez del Alisal suggests that not only work but also play and games are not well considered in Japan unless there is an element of seriousness and they have been achieved with great effort (Rodriguez del Alisal, 2002). Cox found that most of the Japanese respondents in his research on *asobi* (play) saw play as a luxury activity often involving a serious attitude and hard work (Cox, 2002).

The idea of play as we know it is defined by the word we use for it (Raveri, 2002). The Japanese word '*asobi*' for example today means 'play'. But, according to Berque, the *Iwanami Kogo jiten*, a dictionary of early Japanese, explained the verb as originally meaning 'to release the body and the spirit into a world that was different from that of day-to-day life through elation and intoxication. Already mentioned in the *Kojiki*¹⁹ where it meant singing and dancing, it has a number of uses associated with dance, music, feasts, hunting and other practices (Berque, 1997). In the Czech language 'hra' (play) means a game as in chess or football or a play as in a theatre play. However, it is also used in a secondary sense as in one can 'play at something' which means one is not being serious about the activity. It implies an activity done 'on the side' where it does not really matter if it is done properly.

According to Raveri play always includes a change of scene and thus can occur at times when, according to Huizinga, one 'steps out of real life' for example during a prolonged stay in a healing spa (Raveri, 2002). The two spas we are dealing with provide just such a separate cultural space which the participants inhabit for the duration of their treatment. This gives them the opportunity to enter into a different type of 'space' that

¹⁹ Record of Ancient Matters.

Turner called the 'liminoid' space which actually promotes different type of behaviour from the one normally shown by people within their usual society (Turner, 1983).

Liminality

Turner's ideas about liminoid phenomena originated from the liminal phase of van Gennep's three-part process that accompanies the change of status. This change is associated with rituals which have been classified van Gennep in his work on *rites de passage* first published in 1909 (Gennep, 1960). Van Gennep developed a theory based on the coming-of-age rituals as having a three-part structure of separation, liminal period and re-integration, the new term 'liminal' being then introduced by van Gennep into the field of anthropology. The Oxford English Dictionary's entry for "liminal" lists it as a "rare usage: Of or pertaining to the threshold or initial stage of a process." Both the words liminal and liminality are derived from the Latin "limen," which means "threshold", i.e. the bottom part of a doorway that must be crossed on entering a building. It therefore marks a physical change of place. Since its introduction the term 'Rites of passage' has however been associated with all sorts of changes in social status of an individual. Van Gennep considered the liminal phase to be a period when individuals are socially and structurally ambiguous, are in between, a quality resulting from the fact that during this period the subjects are disconnected and dispossessed of their current social position, status or rank and property (Deflem, 1991). Because of this disconnection they are able to interact with the elements of the familiar in such a way as to defamiliarize isolated factors of culture and recombine them in often grotesque ways, or be involved in subversive and ludic events, in other words they are able to 'play' (Turner, 1983). The liminal phase is often also characterized by passive behaviour in the way those taking part obey their instructions implicitly i.e. submit to higher authority.

Turner took van Gennep's ideas and expanded some of the concepts to include some other trends especially leisure. He coined the term liminoid, rather than liminal, for a space in the arena of leisure which he saw as a suitable space for 'play' (Turner, 1969). His concept of the 'liminoid' applies to complex modern societies in which the liminal phenomena that tend to predominate in tribal and early agrarian society are no longer society-wide. Liminoid phenomena are, according to him, more prevalent in post-industrial societies with their newly acquired leisure, where they are more about 'play' and less about 'work'. They are separate from labour and their participation is more of a matter of choice, more of an individual product rather than practiced for a particular sector of the industrial society (Turner, 1983). As such they can be an independent domain of creative activity. He takes leisure not as a state of idleness that may have been experienced by Greek philosophers or 16th century gentry but something that exists only when it complements or rewards work. The distinction between work and leisure which is in many cases hard to separate in tribal and agrarian cultures is clear in modern industrial societies. Leisure presupposes work; it is simply a 'non-work', even an 'anti-work' phase in the life of a person who works (Turner, 1983).

Leisure and play are further associated with two types of freedom, 'freedom from' and 'freedom to', as proposed by Isaiah Berlin in his essay 'Two Concepts of Freedom' (Berlin, 1969). Freedom 'from' releases one from forced industrial activity, while freedom 'to' means that people are allowed to take part in activities usually not available to them or to become creative in a way not usually possible. Within these definitions leisure is taken as originating in the Latin 'licere' or 'to be permitted'. As people enter this zone of leisure they become 'free from' a whole host of both domestic and institutional obligations and they gain the freedom 'to' recuperate and enjoy natural rhythm again (Turner, 1983). People therefore feel that they are free to indulge in the activity of 'play'.

3.6 Summary

This chapter dealt with issues involved in spa therapy as practiced in the two selected locations. These included historical origins of Balneotherapy and its progress from its origins in Greece and Rome to Japan and to the Czech Republic. It outlined some important Japanese concepts e.g. those of *onsen*, *tōji* and *furusato*, all of which are categories associated with well-being, cleansing and healing were discussed, and it introduced play as an element found in spa life.

The following three chapters form the ethnographic section of this work. Building on the issues raised in this chapter they deal respectively with the physical, the medical and the personal aspects of the two spas.

Part II: Ethnographies

Chapter 4: The locations

This chapter will focus on the physical and economic characteristics of the two places selected for this research. The reason for including this information lies in the fact that it helps not only to understand the many similarities between the spas but also to explain how their current medical practices have arisen along both similar and different lines. Some of the similarities are connected with the physical environment and the existence of the springs which influence the many aspects of life of the localities. Others are based on the type of medicine that has been practiced by the local medical institutions both in the past and in the present. In addition there is a link founded on a person, a symbolic link based on the famous physicist and chemist Marie Curie (1867-1934). The *uraninite* ore that was mined in Jáchymov from the late 19th Century until relatively recently was the source material from which Marie Curie isolated radium. This was the first step in her study of radioactivity for which she was the first person to receive two Nobel Prizes. Her involvement in the research of radioactivity has been indirectly responsible for the current prosperity of the two towns and is recognized by them in several ways. The shared recognition has been acknowledged by both spas by erection of a statue to Marie Curie. Besides Misasa Onsen marks her birthday by organizing an annual summer festival in her name that is attended, in among others, by the French Ambassador and several other members of the French Embassy staff. Jáchymov has chosen to honour her by naming one of the three spa houses after her.

Although the waters of the springs show very similar properties there are large differences in the position they have occupied in the history of the two towns. While Misasa's history is very closely related to the very existence and use of the local mineral springs, the use of the springs in Jáchymov is based on, in historical terms, relatively recent serendipitous discovery resulting from on-going mining activity.

4.1 Misasa Onsen

4.1.1. Location and geography

Misasa Onsen, one of the two locations for this study, is a large village in Tottori *Prefecture* that is found on the main Japanese island of Honshū at the foothills of the Chūgoku mountain range about ten miles inland from the Sea of Japan coast.

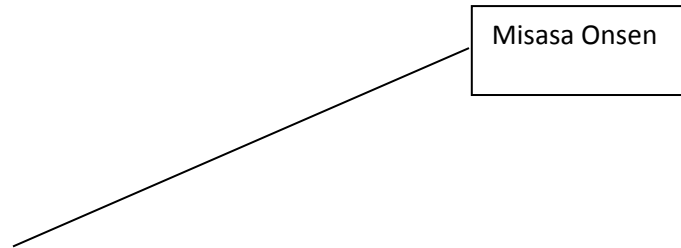


Figure 2 Location of Misasa Onsen in Japan.

The village is administered by Misasa Town located about 2km closer to the coast. The name Misasa, as described by the two Kanji²⁰ characters, means ‘Three Mornings’ (三朝), and the legend connected to the name claims that it is related to a visitor who hundreds of years ago visited the valley. Intending to stay for a day he liked the place so much that he stayed for three days, or mornings, giving the village its name. According to the government statistics²¹ this is one of the least inhabited areas of Japan. The Population Census of 2010 shows that Tottori Prefecture contains only 0.5% of the total population of Japan with population density of only 168 persons per km² which is about a half of the national average of 343 persons per km². Since the 2005 census Tottori’s population has in fact experienced a further drop of 3.1%.

²⁰ Ideographic characters used in modern Japanese writing systems.

²¹ <http://www.stat.go.jp/>

Misasa Onsen, known by many Japanese for its hot springs that are said to have curative, or at least recuperative powers, lies at the head of a narrow valley. To the south it is bordered by the densely forested Chūgoku Mountains with Mount Daisen (1729m) just visible from the town rising out of the Daisen Volcanic Belt. The mountains rise steeply on three sides of the valley, and the few narrow roads leading into the hills are often blocked with snow in winter. Only 10% of the area is available for habitation and farming. The fast flowing Mitoku-*gawa* river that runs through the centre of the valley has been severely regulated and the valley floor artificially widened to claw back as much land for agriculture and habitation as possible. Every available piece of the flat valley floor, however small, is used for rice paddies and vegetable plots, or small orchards of citrus fruit as well as the '20th Century Japanese pear', a local speciality or *meibutsu* (a famous thing). The navigated river bed leaves just enough space for a narrow road to run alongside and follow it to the nearest market town of Kurayoshi and then further on to the sea. This space is so limited that the existence of a heavily used bicycle track is in many places made possible only by the use of an overhang path that runs beside the road suspended above the river.

The dark green walls of the surrounding mountains are completely covered by dense mixed forests where, hidden out of view, lie many isolated, and by now often deserted, villages. Bamboo and pine are the most common tree species but there are also beeches, cedars, autumn grasses and several varieties of Japanese maple (*momiji*). The resulting mixture of textures and, in the autumn, also stunning colours create a beautiful rural landscape the loss of which in so many parts of Japan is bemoaned by Alex Kerr in his 'Dogs and Demons' (Kerr, 2001).

Figure 3: Misasa's autumnal colours.



This landscape of forested mountains and a river cutting through the valley with its rice paddies and narrow vegetable fields, with clusters of farmhouses that have *sazanka* (camellia) and *momiji* (Japanese acer) in their landscaped gardens includes all the quintessential features of the generalized image of *furusato*, one of the most popular symbols of things Japanese (Creighton, 2009; Robertson, 1988). *Furusato* represents the idealized native place, the nostalgic symbol of Japan's past, the rural village or the heart of Japan (Robertson, 1988; Robertson, 1991) valorised as the source of true Japanese virtue and pure Japanese values and a symbol of continuity. In the face of modernity and westernization rural Japan is represented as the repository of national traditions, especially for those living in cities for whom visiting rural areas allows their being reunited with their past by returning to a Japanese *kokoro* (heart/mind) (Ivy, 1995). As will be discussed in Chapter 6 the cultural values that are embedded in the *furusato* concepts seem to play an important role in the way Misasa patients construct their experiences of the spa.

4.1.2 Population and economy

The flat part of the valley supports several small hamlets that have joined together to form the village of Misasa Onsen. Each hamlet has a small shrine to its guardian deity while some of the larger hamlets also support a Buddhist temple. The 'family system' based on the deeply held values of continuity of the *ie* or a family 'line' or a 'house'

(Doi, 1986; Hendry, 1995a) is far from extinct in this rural area, and remains in evidence as an important element in the social structure of the village (Knight, 2003). Many of the houses are surrounded by enough land to be able to build a 'branch house' close to the main house thus creating a group of related houses or *dōzoku*. This branch house traditionally provides accommodation for the family of the oldest son resulting in two, or often three, generations of a family living very close together. The practice of husband adoption into the stem family (*mukoyōshi*), one that will accept the *uchi's* name, is also still much in evidence here (Knight, 2003) and I personally know two families which having no sons adopted the husbands of their older daughter as the *mukoyōshi*.

The key to the existing habitation and the current economic survival of this valley lies in the underlying geology. This volcanic region is based on non-permeable older granitic rocks that are covered by younger, and still hot, volcanic material. As rain water permeates down through the top layers it eventually meets the impermeable and, due to the relatively recent –in geological terms- volcanic activity, hot granite and heats up. Running along a contour this hot water eventually finds a fault in the rock and comes up to the surface. The Mitoku-*gawa* River that forms the backbone of Misasa has picked its course along just such a fault as can be observed from the number of the thermo-mineral springs rising either in or close to the river bed (Figure 4)²².

²² From Mifune (1980) 'History of Misasa Onsen'.

Figure 4: Map of Misasa Onsen showing thermal areas and hot spring wells.

The climate of the area is as unforgiving as the topography. Snow usually comes early in the winter, and is not keen to leave until late spring. The growing season is short which limits the variety of agricultural products grown. The subsistence local agriculture is based on rice, vegetables and some fruit. In 1998, the time of my first visit to the village, no machines were used in the local wet-rice agriculture and I got used to seeing women in the fields bent for many hours a day hand-planting or tending rice and vegetables. Those days have gone and most families now own their own rice harvester but the narrow vegetable plots every family keeps are still meticulously planted by hand, each seedling carefully inserted into a small raised bed covered by finely shredded rice straw.



Figure 5: A vegetable plot in Misasa.

Rice straw used for covering the raised beds.

Use of modern agricultural machinery overcomes the problem of desperate shortage of labour. Reflecting the overall trends in Japanese rural society Misasa too has been witnessing a substantial outflow of its population while at the same time experiencing a drop in birth rate. The majority of those moving out have been the young and economically active and that is reflected both in the age profile and the economy of the village. Misasa Town official population statistics until the year 2005 show that there has been a slow year-on-year decline in the size of the population which is now only about 67% of the 1950s levels. While in 1985 18.9% of the inhabitants were over the age of 65 that figure rose to 30.8% by the year 2005. This is a significantly greater proportion than the national average of 20.1%²³. The opposite is true for the 0 to 14-year-olds. Their proportion has decreased from 18.6% in 1985 to 12.1% in 2005 which is worse than the national average of 13.7%. When this rapid change in the composition of the local population combines with small-unit based inefficient agricultural methods the negative impact on the overall rural economy is enormous. Faced with serious national rural deterioration the Japanese government of Prime Minister Takeshita Noboru started a scheme aimed at improving local conditions. In the latter part of the 1980s the government launched an initiative called the *Furusato Sōsei Undō* (Movement to create hometown identity) (Ivy, 1995; Robertson, 1988).

²³ Statistics Bureau, MIC; Ministry of Health, Labour and Welfare.

Large development block grants (*mura okoshi*) were given to rural municipalities which were aimed at halting the depopulation of rural Japan and creating more job opportunities and therefore providing income for people who remained living in the rural areas (Graburn, 1988; Graburn, 1995; Hendry, 1995a; Moon, 2002). This was to be achieved by two means. First of all by reviving some of the more traditional crafts but secondly by creating new unique products that could be turned into a commodity and exploited in increased tourism. These were the so called *meibutsu* or a ‘famous thing’, which could be anything from cultural or natural aspects of the landscape to locally grown produce (Graburn, 1995).

Misasa Onsen development reflects most of these recent national trends. The dwindling agricultural production carried out by the oldest population group in the village is no longer able to provide families with sufficient income, and the younger couples have had to look elsewhere for employment. Many work in Kurayoshi, the nearest small town that lies close to the coast about five miles further down the river. Originally a busy market town built on a series of canals that provided transport routes for the carrying of goods it has tried, quite successfully, to turn its historical section into a tourist destination. The no-longer used traditional store houses, or *kura*, that line the canal banks, have recently been restored and turned into tourist shops, artisan workshops and small restaurants and cafes.



Figure 6: Historic Kurayoshi.
The restored *kura* houses seen on the left
with stone bridges spanning the supply canal.

Apart from a small amount of tourism Kurayoshi offers limited range of job opportunities in its light industries as well as in local administration, schools and hospitals or in many of the old peoples' homes scattered around the area. The iconic *meibutsu* of Kurayoshi is the so called '20th Century Japanese Pear', a new variety of this popular Japanese fruit. Its hoped-for importance to the local economy can be judged from the size of the cavernous museum dedicated to it that occupies the centre square in the more modern part of the town.

Misasa Onsen Council has also been busily promoting local revitalization both through creating new opportunities and through utilizing its natural and traditional resources. The village now has a tiny art museum, a beautiful 18-hole golf course and a small factory brewing excellent *sake*²⁴. There is a new '*Furusato* health village', a small area created by the river, with a little coffee shop and a potter-&-weaver studio that is open to visitors who want to try their hand at weaving or making pottery. The recently opened (2005) village Co-operative shop sells fresh local seasonal vegetables and fruit as well as a variety of locally made craft objects. There has even been a modest

²⁴ Distilled rice wine.

resumption of charcoal burning, an activity that had previously almost disappeared. It was resumed in response to an increase in the demand for the bamboo-based charcoal by some local restaurants serving organic food. These opened in the wake of the rising popularity of 'green tourism'.

Nevertheless, all of these economic activities combined would not be sufficient to keep the village from a serious economic decline. To keep the community going and to encourage members of the younger generation to stay at home needed an incentive. It required something similar to the situation Moon found when doing her research in a village which, like Misasa, was experiencing a serious economic decline (Moon, 1989). While 'her' village was able to develop a ski resort, in Misasa the survival of the local economy is almost completely dependent on the exploitation of two linked economic sectors based on the presence of the hot springs. These are tourism, the rise of which is reflected by an increase in the numbers of hotels, *ryokan* and tourist shops, and medicine, which is centered on the two large hospitals which were the locations for this study.

4.1.3. The springs, their history and their use in medicine and tourism

Misasa's position as a popular tourist destination and its survival in the current economic downturn is closely connected with not just the presence of the springs but also with their special properties. The springs are classified as thermo-mineral with mildly acid water that contains higher than usual levels of radon gas (around 3-5 Bq/l)²⁵. It is these qualities that the balneotherapists working in the local hospitals consider to be the essential healing elements.

²⁵ Bq - defined as the activity of a quantity of radioactive material in which one nucleus decays per second.

The temperatures of the spring water vary widely between the individual springs and range between about 44°C and 87°C. Depending on where they are found, the springs can be roughly divided into two general groups. Those with the highest temperatures (up to 87°C), and also the ones closest to the surface, are found near the south bank of the river. Unsurprisingly, it is here that we also find the oldest habitation as well as the hot springs with the longest history i.e. *Kabu-yū*. In some of the basements of the tiny old houses lining the street nearest the river, or the oldest part of the village, it is even now possible to find the original old wooden baths; *o-furo*, that are fed directly by hot springs rising from the river bed (Mifune, 1980).

Springs on the north side of the river are not only cooler but are also found at considerably greater depths (up to 200m), and therefore more expensive drilling is involved in reaching them. This is why this area became inhabited much later on in history, and the houses here are bigger and occupy larger plots. None of the houses on this side of the river have the original basement baths. Although it is an area where it may be harder to gain access to the hot water it is also an area with a high density of springs (See Figure 4).

The combination of availability of space and abundance of radon-rich thermal water played a crucial part in the decision to place both the Okayama University Hospital and the Misasa Onsen Hospital here. Both hospitals make use of the local spring water in their healing methods. The presence of radon in the water was also an important factor taken into consideration when the Japanese Government decided to locate its national research facility for the study of radioactivity here. The original institute, The Institute for Thermal Spring Research, initially a research facility run by Okayama University, was opened in 1985. University reorganization in 1995 led to a change of name and to a widening of the Institute's framework of interest. Now called 'Institute for Study of the Earth Interior' (sic), its current research encompasses much more than

the study of radioactivity. It receives generous financial support from the Government and, as a result, it has been able to purchase excellent scientific equipment which enables it to attract top Japanese as well as many foreign geochemists and geophysicists to come here in order to carry out their research.

Misasa's springs have for centuries been used for bathing and purification. They have however also been used for healing. Indeed the first recorded use of a local hot spring mentions the healing qualities of the water already. In common with springs in many other *onsen* not just in Japan but also in many spas in the rest of the world, the discovery of the first spring, or *Kabu-yū*, was associated with an animal legend. Misasa's local legend describes how, in 1164, this spring was discovered by a Samurai. He was hunting a white wolf that was ravaging the area but in the end only succeeded in wounding him. The animal managed to run away but was found later by the Samurai resting on a tree stump (*kabu*) bathing his wounded paw in the healing water of the hot spring (*yū*-hot water). Some of the other Japanese legends that describe the discovery of hot springs while endowing these springs with healing properties include the legend of the discovery of *Arima-onsen* or *Kinosaki-onsen*. The discovery of the former is linked with three wounded crows and the discovery of the latter with a wounded big bird (Guichard-Anguis, 2002). Misasa's healing spring of *Kabu-yū* has been in continuous use for bathing ever since its discovery (Fraser, 2004), and is even now supplying hot water to a *sentō* ²⁶ that serves primarily as a bathhouse for a nearby hamlet. For a small fee of about one pound visitors are able to relax in the hottest bath water in the village (around 46°C). The animal legend is commemorated by a statue of the Samurai and the white wolf that used to be located in a prominent place beside the main bridge. As part of the drive to increase tourism the old *Kabu-yū* bathhouse is being renovated and a small square is being created in front of the bath where the statue is going to be placed. At the same time, in order to persuade tourists

²⁶ Communal bathhouse where one pays to use the facility .

to come to this remote but interesting spot, see the statue and visit the *sentō*, a new ornate path that starts in the village centre is currently being laid to guide them there.



Figure 7: The Samurai and the injured white wolf.

The springs were initially used only by those living locally. There is evidence however that already in the Edo period (1603 - 1868) a small number of visitors was coming to the area to use them. The “Misasa Chronicle”(Mifune, 1980) mentions the use of the springs when describing the history of Misasa’s oldest, and still used, *ryokan* (traditional Japanese inn), the *O-cha-ya* -御茶屋 - (or the Honourable Tea-Place). The *Cha-ya* were generally places where travellers could take tea and have a rest. This particular *cha-ya* is distinguished from the common ones by its honorific prefix “o” - 御 - which signifies that this is a place reserved for the sole use of the feudal lords and their immediate families. It was originally run as a place of rest for members of the important Chōshu clan²⁷ , and it was one of sixteen such *O-Cha-ya* in the Tottori area. There are similarities between the exclusivities of some of the *cha-ya* and those of the Japanese inns – or *ryokan*- places which have been used to accommodate travellers

²⁷ A feudal domain during the Edo period powerful in the Chūgoku area of Japan where Misasa Onsen is located.

since the Edo period. Guichard-Anguis' work on *ryokan* (Guichard-Anguis, 2009a) discusses the different kinds of inns that were available to the travelling feudal lords or *daimyō* (the *honjin*), and the auxiliary *daimyō* inns (the *waki honjin*) in which the rest of the retainers could be accommodated. The spring that supplied the Misasa *O-Cha-ya* with water was named the *Ichino-yū* (or First Spring), and Mifune, in his "Misasa Chronicle", gives the date of its first use as being 1664. He also mentions that at the time there were two other bathhouses, the *Ni-no-yū* or the Second Bath, that was reserved for the *Samurai*, and the *San-no-yū* (the Third Bath) used by the common people (Mifune, 1980).

The existence of so many *cha-ya* suggests that a significant amount of travel went on in the area during the Edo period (1603-1868). To be able to appreciate the size of this travel one has to appreciate the conditions under which travel was made possible during this period. An official travel permit was needed if one wanted to be allowed to travel outside one's place of residence. These were most commonly issued for two reasons. One was to go on a pilgrimage, and the other was for a visit to an *onsen*, usually in order to cure a health problem (Uchida, 2008; Vaporis, 1994). Guichard-Anguis however suggests that for the peasants these two reasons were often little more than excuses for getting away from the everyday environment of hard work. According to her, for the common people to travel, or *tabi*, in the Edo period was a new and exciting departure. Prior to this period it was only the aristocracy, the monks and the priests who were allowed to travel. To be able to go on a journey therefore opened up a possibility to enjoy oneself or 'to play' (Guichard-Anguis, 2009a). Travellers coming through the Misasa area were often on their way to visit the Mitokusan Buddhist temple that lies about eight kilometres further up the valley. Others were often coming for *tōji* (湯治) or water-based healing in the *onsen*. These families would normally take a room in a cheap *ryokan* where they usually cooked their

own meals using supplies they brought with them from their own farm. They also often brought their own futons for sleeping. The time taken for this type of restorative stay varied from one week to a maximum of three weeks (Takei *et al.*, 1989; Uchida, 2008; Uchida, 2009). Pilgrimages and *tōji* were frequently combined. A trip to an *onsen* to be healed often included a visit to a temple or a shrine to pray for recovery from any ailments the people might be suffering from. Dr. Mifune's 'Misasa Chronicle' (Mifune, 1980) also gives us an idea of how the numbers of visitors using the local springs have changed in more recent history. Starting from the Meiji period (1867 – 1912) some of the hot baths kept records of their visitors' numbers. Thus Yamada *onsen* (one of Misasa's more recently formed hamlets to be found on the north side of the river) recorded 42, 38 and 40 visitors respectively, in the three years between 1870 and 1872. By 1879, however, the combined numbers of visitors coming to Misasa for *tōji*, using one of the three springs that were available to the general public, reached 2336. This increase was probably due to several socio-economic factors which made it both possible and reliable to travel around the country (Nakamura, 1980). These included higher general standard of living of commoners, improved transport and accommodation facilities and relatively safe conditions for travelling (Creighton, 2009; Vaporis, 1994). The number of tourists coming to Misasa increased steadily, and dramatically, after the war until they reached over half-a-million in 1996²⁸. This figure reflects the present-day increase in leisure time, the expansion of the economy and the significant improvements in local infrastructure. In common with the rest of the country both rail and road access to Misasa has recently undergone a massive expansion. There is a new (2007) direct train connection to the Osaka/Kobe area as well as a growing network of new roads. These improvements are reflected in an increase in the numbers of visitors who come here from all over Japan. The numbers peaked in 1996 after which the burst of the 'bubble economy' has had a profoundly

²⁸ Misasa Town statistics.

negative effect on local tourism, with the tourist numbers falling to around 350,000 in 2008.

As tourism forms by far the most important section of the *onsen* economy the Town Council has been looking for new ways to boost the visitors' numbers. These numbers are made up by visitors that generally fall into two groups both of which come because of the springs and their water. One group consists of tourists who are looking for pleasure and comfort, and who come here mainly to enjoy a stress-free time in the *onsen*, to eat gourmet meals, to do a little shopping and to rest while enjoying the natural beauty of the environment (Ackerman, 2007) . The second group consists of patients whose interests focus on the healing properties of the *onsen* water and the quality of the care offered by the hospitals. It seems that to sustain the economy new ways need to be found which would potentially meet the demands of both of these groups. The Town Council and the Okayama University Hospital management have come up with a proposal for a joint venture. They have suggested a scheme in which the tourists who are coming to enjoy the luxury provided by some of the local *onsen* hotels could combine this with a limited access to the hospital medical expertise. Visitors would come for an extended weekend, and for a special low price stay in one of the two hotels taking part in the scheme. They would then be given a total medical check-up in the hospital, again at a significantly reduced-rate. The pilot trial that was launched on the Internet in the late autumn of 2009 sold within two hours of being advertised. At this point it is too early to say whether this plan is going to make a significant impact on tourist numbers in Misasa.

Bathing with nature

One of Misasa's' main attractions is what Graburn considers to be 'the highlight of the most attractive *onsen*' (Graburn, 1995) or the open-air bath or *roten-buro*. This popular local landmark which features on most of the advertising for Misasa Onsen is located in close proximity to the main bridge that connects the two sides of the village. That is

where, in a shallow depression close to the river bank, one of the hot springs comes right up to the surface. This rock basin has recently been artificially enlarged and the resulting shallow pool lined with boulders of natural rock making the open-air bath not only larger but also more 'user-friendly' and more accessible. A simple bamboo screen provides the naked bathers with somewhat inadequate protection from the eyes of the passers-by and the traffic that is moving barely 30m away. This outdoor bath is, in theory, gender neutral. Almost all the advertising for the spa features pretty young women enjoying this bath. These frequently used images are, as Graburn points out, often misleading (Graburn, 1995) which is very much the case here. Contrary to the advertising images it is far from comfortable for women to use the open-air bath. The bath is very popular and used regularly, i.e. daily, by many older local men, and at the same time enjoyed by many male visitors to the *onsen*.

Figure 8 shows a very typical everyday scene at the *roten-buro*, the proximity of the bath to the main road and the protective bamboo screen. Several men are visible in the bath. In all the years of coming to work in Misasa I have never seen a woman using the bath and so, regretfully, decided that it would not be possible for me to experience the pleasure of enjoying the real 'bathing with nature'. Several of the female foreign research students working in the Research Institute however resolved that they did not want to miss this, for them unique, experience, and one night, at three o'clock in the morning, went to have an outdoor bath. The next morning they were able to report how much they all enjoyed the experience and also that at that time of night there was no danger in being observed. My personal luck turned on the morning of the New Year's Day in 2010. A heavy overnight snowfall deterred most people from coming outside in the early part of the day. The bath was therefore deserted and I could finally enjoy 'communing with nature', floating in water of 45°C surrounded by newly fallen undisturbed snow (Figure 9).



Figure 8: Daily scene in the '*roten-buro*' with a number of men using the bath.



Figure 9: The same '*roten-buro*' on New Year's Day morning.

4.1.4 Buddhism – temples and the Buddha of Healing

As the existence of so many of the above mentioned *cha-ya* suggests not all visitors to Misasa came specifically for *tōji*. For many this was a place on route to another destination, almost certainly the spectacular early 8th Century (706) Buddhist temple, 三徳山三仏寺 (*Mitoku-san Sanbutsu-ji*), which has been an important place of pilgrimage since its beginnings. Located high up on Mt. Mitoku, (the Mountain of three Virtues - Virtue of Mercy, Virtue of Knowledge or Wisdom and Virtue of Renunciation of Worldly Desires) which lies further up the valley this temple annually attracts thousands of tourists. Figure 10 shows a scene from one of the major temple events of the year i.e. the 'Fire Festival' during which hundreds of participants walk across the flames from a dying fire that was fed by thousands of small wooden tablets or *gomachi* that are thrown on it by the monks. The individual messages of misfortunes or worldly desires that have been written on the *gomachi* are taken to heaven with the rising smoke. Those who walk over this fire believe that this act will purge their souls from all the sins committed in the course of the year.



Figure 10: Mitokusan priest is the first person to walk on the fire during the 'Fire Festival'.

This important Buddhist temple belongs to the *Tendai* Buddhist sect and was initially built as a training ground for *Shugendō*, a Buddhist sect the followers of which are trying to attain enlightenment through the perception of experiential "awakening".

This is obtained through the understanding of the relationship between humanity and nature, centered on an ascetic, mountain-dwelling practice (McMullen and Kornicki, 1996). Even now many of the visitors follow the arduous, and at times dangerous, mountain trail that climbs from the main temple to *Nageiredo* ("thrown-in temple"), a tiny platform temple that is balancing precariously on top of tall thin wooden supports pressing it into the overhanging rock (Fig.11). This rock temple has been declared the only National Treasure in Tottori prefecture, and is another example of *meibutsu* or a cultural fixture of the local landscape (Graburn, 1995).



Figure 11: Nageiredo temple.

Although the first Buddhist temple in the area was not associated with the curative properties of the local springs there are many historical examples of local connection between Buddhism and medicine or healing (Williams and Miyazaki, 2001). One of the most important and cherished Buddha figures in Japan is Yakushi Nyorai, or the Buddha of Healing, whose devotional cult was one of the first cults to develop in Japan after Buddhism was introduced during the 6th Century (Suzuki, 2012). Usually depicted holding a medicine container in his left hand this Buddha was not approached by the devotees in order to gain universal truth but was rather as a magical divinity who could deliver them from suffering through healing, success or wealth which granted nourishment to the mind and the body. His popularity can be judged by the large numbers of his images and temples dedicated to him. By the Nara period (710-794) court elites, including emperors and their consorts, were commissioning the making of

monumental Yakushi images and enshrining them in grand Buddhist Temples (Suzuki, 2012). Of the eighty eight temples that collectively form the well-trodden Shikoku Pilgrimage, for example, twenty three are dedicated to Yakushi. The origins of Arima *onsen*, one of the oldest *onsen*, are also associated with Yakushi Nyorai and an annual festival is held in his memory there (Guichard-Anguis, 2002).

In Misasa one can find several examples of spiritual association between the mineral springs, their healing properties and Yakushi. The most prominent of these is the delicate Buddhist temple of *Nan-en-ji* which is dedicated to Yakushi and which sits high up above the Mitoku-*gawa* River overlooking the *roten-buro*.



Figure 12: *Nan-en-ji* temple in Misasa.

This small temple was built in 1927 by a Buddhist priest from Kyoto. While looking for a remedy for his neuralgia he was advised by a friend to come to Misasa and try the local springs for *tōji*. Following taking daily baths in the onsen water he experienced a complete release from the pain he suffered during his illness. In gratitude for his recovery he decided to build a temple and dedicate it to Yakushi Nyorai whose image is enshrined in the temple.

Several wooden images of Yakushi can be found in a small shrine recently built in the Misasa village centre. According to Mifune (Mifune, 1980) the oldest of these images

has been dated and found to originate in the Heian period (11th Century). These wooden images were originally placed in several of the old local bathhouses (*sentō*). To prevent these delicate statues from damage the community decided to house them in this protected location.



Figure 13: Misasa Yakushi Nyorai images.

4.2. Jáchymov Spa

The town of Jáchymov Spa in the Czech Republic was, for reasons listed at the start of this chapter, chosen as a suitable location for making a cultural comparison between Japanese and European balneotherapeutic practices. The town has a fascinating history in which the mineral springs make an important but, compared to Misasa, relatively recent contribution.

4.2.1 Location, population and economy

There are many similarities in the physical environment, the presence of springs and the quality of the spring water which all lead to a provision of a similar type of medicine. The historical and economic background to Jáchymov as a spa is however

very different from that of Misasa where both of these features are closely related to the existence of its natural mineral spring water.

Jáchymov is first and foremost a mining town and the influence the local mineral springs have on its prosperity is of relatively recent origin. Formerly called Joachimstahl, it lies about 60 miles west of the Czech capital city of Prague in Krušné Hory (translated into 'Ore Mountains' in English), a mountain range that has formed a natural border between Bohemia and Saxony for hundreds of years.

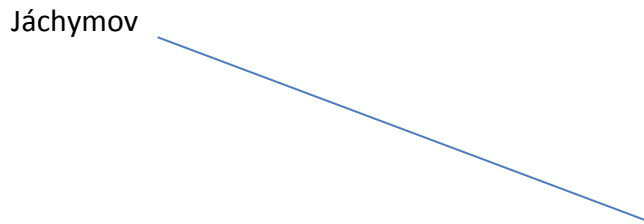


Figure 14 Jáchymov's location on the western border of the Czech Republic.

The mountains are scarred by deep narrow valleys and are covered by dense, mainly coniferous forests. The harsh climate is cool with annual average temperatures of about 5°C and higher than national average annual precipitation of about 900 mm. The narrow valley along which the town is spread often experiences temperature inversions with cool air flowing down from the high plateau to form a persistent cold lake at the bottom. This forces warm air to flow upwards where, especially in the

winter, it meets the colder air coming down from the north and frequently causes the formation of fog. On average there are more than 50 foggy days per year, and cloudy days persist for more than 70% of the year (Lomský *et al.*, 2001). Those who come here either as short-term visitors or as patients have to be prepared to put up with these, at times fairly unpleasant, climatic conditions. So why have people come to inhabit this area in the first place and why do they still come to visit?

The very name Krušné Hory already hints at the main activity this area is involved with. The verb 'krušit' means to mine in the old-fashioned way i.e. one man using a hand-pick. The English name of "Ore Mountains" gives a further clue to the character of the mountains by stressing the presence of 'ore' of which several important types are found here. Mining really was the main reason for the initial settlements in the region. The area is rich in many valuable minerals, the mining of which has been at the heart of both the town's existence and its prosperity. Mining was what brought the first settlers at the beginning of the sixteenth century, and since then silver, tin, copper, iron and uranium have all been mined here, although at different times, each putting a distinct mark on the town's history and development. Just as the mining of the various mineral resources waxed and waned so did the population numbers, the various dependent industries and the historical importance of the surrounding small towns. Apart from the mineral wealth this area is also rich in a very different natural resource i.e. warm mineral springs. Running along the foothills of the mountains is the river 'Teplá' (meaning warm), one of the manifestations of the underlying granitic uranium-rich rocks that are characteristic of the region. In a process similar to that of Misasa the underground warm water rises in many places to feed the natural springs which are responsible for the existence of several spas. The best well known of these has been the beautiful spa town of Karlsbad (Karlovy Vary), a place popular with thousands of visitors ranging from crowned heads, well known artists, musicians and politicians to ordinary people (Křížek, 2002; Sheasby, 2001). It has been known not just for its several

mineral springs but also for its social life and the many luxury hotels and casinos. Other well-known spas in the area are Marienbad, Franz Josef's bad and, to a more limited extent, Jáchymov. Jáchymov is much smaller than the other three and also less sought after a spa with a population of about 3500 in 2007. It may have one luxury hotel, well-kept parks and pleasant cafés and restaurants but it is generally less luxurious and definitely much less glamorous. Its climate certainly affects its popularity but its size also reflects the fact that the local therapy attracts a fairly narrow group of patients who come for a specific type of therapy.

The valley that cuts through the centre of the town is very steep with the oldest part of the town clustering around St. Joachim Church (built between 1534 and 1540) that stands at its highest point. This historical part of the town is not without some architectural merit with many of the houses having elaborate and elegant doorways and graceful proportions but, sadly, most are empty. The reason for this is not that people don't want to live in these buildings but it is because they are not allowed to. Instead of sand in the mortars and plasters the 19th Century builders used the waste from the local production of uranium paints. The walls that are contaminated by the radioactive residues continue to be too active to permit legal occupancy (Thomas and Drábová, 1993). Many of these empty houses have been illegally taken over by a thriving, and mostly unemployed, population of Roma or Gypsies, as a result of which the upper end of the town has become sadly dilapidated. This situation is sharp contrast to the more recent development at the lower part of the town. This is almost entirely linked to the spa-related activities and inhabited, if only temporarily, by the spa's relatively comfortably-off patients. The area in between these two geographical and economic extremes has been slowly but certainly taken over by a Vietnamese community. These are by now the descendants of those who arrived in the late nineteen seventies as part of the first wave of the 'Vietnamese Boat People' (Vietnamese refugees from Communist-controlled Vietnam). They have gradually

restored many of the houses and are now successfully running many small shops and businesses.

Although mining is long gone the most recent chapter in the town's history is still connected with it, even if indirectly. The mineral springs that supply the present-day spa with its water were discovered deep in one of the original mines in the late nineteenth century as an unwanted by-product of mining activity. They are directly responsible for the town's current wave of prosperity. They annually bring hundreds of patients who come to the local medical establishments in search of healing, and they also bring large numbers of tourists who come to enjoy the many types of 'wellness' packages offered by some of the hotels. The latter group of visitors often takes part in some of the many outdoor activities offered by the surrounding mountains. This area is paradise for those who like taking part in outdoor activities at any time of the year. The seemingly endless mixed forests are criss-crossed by well kept, well signposted and in summer very well-used footpaths and cycle paths while in winter there is access to several small undemanding ski areas that are especially popular with families with young children, as well as several excellent cross-country ski circuits. And, as most roads in this country seem to need to lead to a pub (or its equivalent), this need is met by many venues situated along all but the remotest paths that offer a warm welcome as well as good food and drink. Tourists also enjoy visiting the historical part of the town for its church, for the memorial to those who died in the horrific labour camps associated with the uranium mines and the excellent museum of local history housed in the original 16th Century Mint.

4.2.2 The mineral springs - their history and their use

To explain how the town's present role of a spa practising Balneotherapy fits into its mining legacy one has to follow its history from its origins until the present. Despite the fact that Jáchymov's turbulent history is only about five hundred years old during this relatively brief space of time the town has gone through amazingly high peaks followed

by deep troughs of fortune. The peaks were times of industrial activity accompanied by truly astonishing prosperity and high population numbers, and the troughs were times of equally astounding poverty and depopulation. The scale and speed of these changes is breath-taking. One thing that they have in common is that the key reasons for all the changes are to be found in the ground on which the town lies. All the ups of the town's fortune are tied to the discovery and extraction of some locally occurring natural resource, and all the downs by its following exhaustion. The underlying geology appears to dictate the town's remarkable history.

Jáchymov's history seems to fall naturally into three discreet phases each based on the availability and exploitation of the dominant natural resource at the time. The town was first associated with the mining of silver after which came several periods of industrial activity based on the mining first of cobalt and then of uranium, and finally, and currently, it is experiencing the time of the 'living water', as that was the original name given to the water on which the present spa is based. The last two periods of prosperity, i.e. the nineteenth century industrial period and the 'living water' period that followed it have a direct bearing on this work.

The time of silver

The town originated in the early 16th Century following the discovery of silver in the area. Miners, mainly Lutherans, poured in from the eastern part of Germany (Saxony), and the population increased rapidly from virtually nothing to about 18000 in the space of 50 years. It quickly became the second largest town in the country (Hornátová, 2000). Its importance at the time is reflected in the fact that it was granted the privilege of being allowed to mint its own coins. The old German monetary unit of *thaler*, from which the English word dollar is derived, refers to the Joachimsthaler, a coin first minted in Jáchymov in 1517 (Veselovský *et al.*, 1997). Jáchymov's decline in the 17th century was almost equally as rapid as its rise the century before. A

combination of the drop in the price of silver that followed the escalation of silver imports from the 'New World' (Kumpera, 2004), the plague, the 30-year war, and the religious persecution that followed the accession of the catholic Habsburgs onto the Czech throne, reduced the town population from 18000 to mere 529 by 1623 (Hornátová, 2000).

The time of industrial activity and uranium mining

Mining activity however resurfaced in the 19th Century, first based on cobalt, and a hundred years later on uranium. A local chemist discovered that beautiful pigments could be extracted from the local ore and used in the manufacture of china and glass. Following this discovery 1853 saw the opening of a factory in Jáchymov that produced these special paints (Sutnar, 1932). Becquerel's 1896 discovery of radioactivity was yet to come and so nobody could at that time be aware of the paints' radioactive content. Due to a long tradition of glass and china manufacture in Western Bohemia the factory had a ready-made local market and consequently became successful. This was followed by another significant rise in population.

The ore, officially known as *uraninite*, was used in two different ways. First of all the whole ore was used for extraction of the material used in production of uranium paints but eventually interest shifted to what was left after the extraction i.e. the so called tailings named *pechblende* (pitchblend in English) or 'unlucky stone' by the miners (Thomas and Drábová, 1993). It was from this '*pech*' or 'unlucky' waste material, that in 1898 Marie Curie isolated a miraculous new element – radium. For this pioneering work she was in 1903, jointly with Henri Becquerel, awarded the Nobel Prize for physics, and her association with Jáchymov made the town into 'the cradle of the atomic age'. The photograph in Figure 15 shows Marie Curie during her visit to Jáchymov on her way from receiving her prize. Jáchymov's museum also displays a copy of one of the several permissions given by the 'Ministry of Public Works' to

Jáchymov City Council allowing it to supply “M. Curie” with 50kg of the tailings (Figure 16).

Figure 15: Marie Curie in Jáchymov on her way
from receiving the Nobel Prize in physics.

Figure 16: Letter from the Ministry of Public Works to Marie Curie.
(Note: The letter is not dated).

This association with pechblende became the source of both bad luck and good fortune. The former because of the ill health many of the miners suffered while working with the ore e.g. an unusually high number of fatal lung disorders, probably a mixture of silicosis, tuberculosis and lung cancer (Grosche, 2006; Tomášek *et al.*, 1994), and the latter because of the prosperity it eventually brought to the town.

Following the discovery of radium and its many uses e.g. in medicine (Wright, 1929) Jáchymov's mining activity resurfaced and the uranium mining output rose steadily until, between the years of 1910 and 1912, Jáchymov had a world monopoly on its production (Veselovský *et al.*, 1997). During the Second World War this area belonged to the then 'Sudetenland' and was occupied by Nazi Germany which needed uranium to support its atomic research. Prisoners Of War (POW) were used to extract the ore. After the war the 'cold war' sabre-rattling that characterized the nineteen fifties and sixties was dependent on a supply of uranium and, as Jáchymov at that time was capable of supplying most of the Eastern military block's uranium (Zeman and Karlsch, 2008), this marked the last and the most extensive period of uranium mining operations in the district. By then, of course, there were no more POWs and so the state started using its 'political' prisoners (or all those deemed politically unacceptable) to carry out this dangerous work. The entire upper part of Jáchymov town and its immediate countryside where several large and brutal labour camps were established were cordoned off and declared a 'no-go' area for anyone but the military. By the time this tragic era came to an end, in 1962, these camps held up to 65000 men. No-one ever managed to escape, and many men died and were buried in mass graves with their families often not even told they were dead. The only reminder of the unhappy episode in the town's recent past are the twenty stone monuments placed in front of the church at the head of the valley, each one representing one of the labour camps that housed the unfortunate prisoners. The local museum pays a tribute to them and devotes one section of the displays to commemorate those who died here.

The time of the ‘healing water’

The mining of uranium-rich ore may have brought suffering and pain to the miners but at the same time it brought prosperity to the town. This arrived with the accidental discovery of underground springs with their warm, slightly acidic and rich in radon gas water, and started a new chapter in the town’s history. Its use in pain-relief is now the corner stone of Balneotherapy offered by the large medical establishments that have grown around the springs.

4.3 Summary

This chapter dealt with the physical environment of the two spas, their history and their economy. It introduced the local mineral healing springs, and illustrated their discovery, their spiritual associations and their use throughout history. Existing literature shows that the use of the springs in Misasa, both for bathing and for healing, can be traced back many centuries, and that the existence of these springs has been responsible for much of the development of the area. In contrast, the springs in Jáchymov are of very recent origin. They were only discovered in the nineteenth Century, and until then the town was well known for its mining activity alone. Despite these historical differences, as the chapter demonstrates, both places show that, at least at present, the mineral springs are the foundations on which prospering local economies are based. They bring in not only tourists but also large numbers of patients who come on the recommendation of their physicians looking for relief from chronic pain. The following chapter will concentrate on the use of the springs for medical purposes.

Chapter 5: The springs, the spas and the medical institutions

This section will recount the history of the health care institutions that use these springs in healing and explain the various procedures they include in the system of Balneotherapy. The chapter will also compare and contrast the management practices of the institutions as grounded in the two cultures, and try to find out what effect this has on both the behaviour and the experience of the patients.

As mentioned in Chapter 3 healing springs have been through history associated with various deities. Some of the examples of springs being dedicated to gods include Asclepius and his daughters Hygieia and Panacea in Rome, Apollo at Aachen or Sulis Minerva, the local goddess of the thermal springs that still feed the spa baths at Bath (Dvorjetski, 2006-2007). Among the large number of springs found on the territory of the Czech Republic many are considered to be healing. These are usually associated with various saints, most commonly with Saint Anna and Saint Mary (Křížek, 2002). The suitability of different spas to treat different disorders is currently based on accurate chemical analysis of the spring water's mineral content as well as other properties e.g. the water temperature (Porter, 1990). Springs in both Misasa Onsen and Jáchymov Spa are slightly acid and their water is characterized by being radon-rich. The springs are classed as thermal²⁹ in the case of Misasa Onsen and warm in the case of Jáchymov. Based on these qualities the spas concentrate on dealing with mainly elderly patients who are suffering from chronic, usually incurable and painful, inflammatory disorders of the joints. It is this pain, commonly treated by drugs with often undesirable side-effects that both spas, using the medium of water, are trying to relieve.

²⁹ Spring whose average temperature is higher than the average annual temperature of the area where it is located (Dvorjetski, 2007).

Although there are similarities in the general type of therapy, the properties of the mineral water and the illnesses treated there are several important aspects of the practice of Balneotherapy in which the two places differ. The first one lies in the way the two spas use their water, and the second resides in the categorization of the institutions that provide the therapy.

The most important ingredient of Balneotherapy as practiced in the two spas is total body immersion in the spring water. But while the Misasa patients achieve this by bathing and exercising in the hospital pools filled with the thermal water, in Jáchymov the same effect is achieved by twenty minutes-long daily immersion in the local spring water that takes place in specially adapted bath tubs. Added to this key process are several supplementary procedures e.g. physiotherapy and massage, as well as some more specific procedures e.g. local application of hot mud or paraffin, and localized foot or hand baths. These are further supplemented by special diet, gentle exercise and rest.

The effect the type of the institution that provides the therapy has on its users is the second difference. In Misasa the therapy is provided by two hospitals and the Balneotherapy users are categorized as 'patients'. Their lives are more or less confined to the hospitals which impose strict rules on most aspects of the patients' daily lives. In contrast, Jáchymov's users are labelled as 'spa guests' and are both accommodated and treated within the confines of three large so called 'spa houses' (Lázeňský Dům) which are a combination of a hotel and a hospital. The guests' lives are much less controlled, with fewer rules imposed, and guests are able to engage in a busy social life outside these institutions.

This chapter will first of all consider the properties of the springs. It will then describe in detail the many procedures that together create the system of therapy the spas use for healing, before finally moving onto discussing the different styles of management of the institutions and the possible way this might affect the results.

5.1. The springs and their role in the healing process

Despite the difference in the water temperature between the two spas the springs display many common characteristics the most important of which is the elevated level of radon gas (Misasa 4Bq/l, Jáchymov 5-20Bq/l). From my informal discussions as well from direct questioning it was clear that it is the theory of adaptive and stimulating response to small doses of toxin, i.e. Hormesis that the balneologists in both spas support.

5.1.1 Patients' attitudes to the presence of radon

But how do the patients feel about the potentially harmful therapy they are taking? As we are dealing with a radioactive substance it would be understandable if the spa patients had reservations to being exposed to higher levels of risk as a result of the treatment they undergo there. However, before the patients can express any attitude to the presence of radon they first of all have to be aware that there is radon in the water. Only then can one ask if they understand its potential whether beneficial or harmful. In other words, the medical professionals assume that their patients are able to make informed choices about the risks concerned. These choices are based on both the nature and the availability of information about the radioactive aspect of the spas, and on the level of pain the users are experiencing. This information is subject to change over time but it also shows differences between the two locations.

In the case of Misasa Onsen, the published information has changed significantly between the time I first went there in 1996 and the present. Detailed information

about the geographical characteristics of the spa, the illnesses treated and the procedures offered can be found on the websites of both spas as well as in their printed advertising. When I started this research several years ago the presence of radon was included in among the information the Okayama University Hospital was giving to the patients. During my second visit I noticed that radon no longer features in any of the publicity material. This, as well as several other differences, seemed to have accompanied the change in management which happened between my two periods of fieldwork between late 2006 and summer of 2009. As many of the changes have a direct effect on the life of the patients, and therefore on this study, they will be discussed below in the Hospital Management part of section 5.2.1.

Many of the participants that I interviewed during my second visit to Japan claimed that, prior to coming to Misasa for treatment, they knew nothing about the presence of radon in the spa water. Whatever knowledge they had at the time of the interview they received it from other hospital patients. This acquisition of medical knowledge from other patients is a common feature of chronic illness. Chronically ill people often become very knowledgeable about their condition and often 'mentor' new patients (Charmaz, 2000). It was not easy to find the motivation of this change in emphasis but the main reason seems to be the intake of new, and younger, physicians who have recently joined the medical staff of the hospital, and who are not specialist balneotherapists. While they did not want to discuss this matter openly in public, during private conversations they admitted to being sceptical about the effect of radon on the disorders treated. I was not able to be present during medical consultations with individual patients and so cannot confirm the patient claim of not being told about the existence of radon and its involvement in the therapy.

In complete contrast, Jáchymov's management actively capitalizes on the presence of radon in the water, and the word 'radon' appears on all of the spa's advertising

material. “The first radon spa in the world” is proudly displayed on the banner heading of the spa’s official website <http://www.laznejachymov.cz/en/>. Consequently, all those interviewed in Jáchymov were aware of the presence of radon prior to coming. Although patients simply accepted the situation some have taken the trouble to learn more about radon and its effect on health. One of the men, a retired engineer, had, before coming, done a significant amount of Internet-based research on the potential danger associated with radon. He said that he wanted to know both sides of the radon story before deciding for himself whether to come here. Despite understanding that there is an element of risk these patients were prepared to undergo the therapy. Were they worried or concerned, or were they fatalistic and not caring? How did they explain their decision to come here and what made them consider radon to be a healing rather than a dangerous substance? Those who were aware of the presence of radon needed to construct some sort of explanatory model of radon use that rationalized their course of action.

5.1.2 Explanatory models

The term ‘explanatory model’ coined by Arthur Kleinman (Kleinman, 1980) deals with “the notions, beliefs and perceptions about an episode of illness and its treatment that are employed by all those engaged in the clinical process”. This includes both sides of the medical process i.e. the practitioners with their explanatory models, and the patients and their explanatory models. These models also cover the interaction between the two groups. Formulation of these models by both sides is subject to many influences ranging from cultural beliefs to publically available information.

Erickson, in her research into radon therapy, worked with a self-selected group of people who visit the so called ‘Health Mines’ in Montana (Erickson, 2004; Erickson, 2007b). These are disused old mines where the visitors expose their bodies to radon

gas trapped in the corridors. This is typically done in two to three visits per day for periods of up to ten days. There is no authority that recommends the therapy or indeed the dose in the first place, no physicians are sending the users to come here, and there are no medical personnel on the premises. What explanatory models did these users base their behaviour on? Erickson found that these users showed several different attitudes to radon. One was based on the belief that there are “different kinds” of radon, and the one found in the mine is of the benign or the beneficial type. Another one was that radon was a gift from God and therefore was endowed with exclusively positive qualities, and yet another that radon is a “more natural” substance the use of which is preferable to taking drugs. Users of this therapy held a definite position on the effect of radon that was based on their expectations, suppositions or judgement i.e. they arrived at their own interpretation of the situation.

Medical practitioners of radon spa therapy in the Misasa hospitals and Jáchymov spa houses also subscribe to an explanatory model of its use, one that is based on the medical training they received in the specialist courses on Balneology and Balneotherapy. This allows them to view radon as not just an effective but also a safe way of reducing pain. They seem so certain of their points of view that they are happy to recommend this therapy to their patients.

All the guests in Jáchymov and most of the patients in Misasa Onsen were indeed undergoing Balneotherapy on the recommendation of their physicians. This included patients who knew about radon and who either did not feel they needed to provide an explanatory model of radon use or, if they did, they found one that allowed them to carry on using the therapy. To a limited extent, and prior to coming here, patients were free to exercise their choice as to which spa, if indeed any, they were willing to go to, or to decline the use of this complementary therapy altogether. Many of the Japanese participants have done just that. They only arrived in Misasa after having

unsuccessfully tried different hospitals or different methods. The Czech patients usually had a choice of several spas offering similar therapy. Their decision to come to Jáchymov came, as they explained, as a result of listening to the 'expert' medical opinions. These helped them to convince themselves that in coming here they were making a rational decision. There was one more and overriding reason for using the therapy which was expressed by both groups of patients. They came to use the therapy because they were in pain and needed help. The level and persistence of the pain people are experiencing during their chronic illnesses is such that most mention not being worried about the potential long-term harmful effects of the therapy. The average age of the patients (66.5 in Misasa and 62.5 in Jáchymov) suggests that most are elderly. Many of them commented on not being at all interested in what might be a health problem in twenty years' time. Their pain is here now and they need to deal with it. The usual way of controlling this pain is to use anti-inflammatory drugs but many patients were not happy about this biomedical method. It may be effective in relieving pain but for many it also quite quickly produces undesirable side effects e.g. stomach or intestinal bleeding (Brune *et al.*, 2008; Chang *et al.*, 2005). Many also mentioned that they simply did not like the idea of taking drugs on a daily basis for extended periods of time. Having tried other methods and without success patients are willing to try almost anything that might help them. The summary of the interviews (See Appendix A) shows that almost 100% of patients experience a long-term relief from pain (lasting up to six months), and this, when combined with their age, makes the users not particularly concerned about the remote possibility of getting lung cancer in some distant future.

"I do not care about the radon", said one female patient in Jáchymov, one of several who have been coming for a number of years. "I need to live now and be able to sleep and move without pain, now."

5.2. Misasa hospitals

Situated about five hundred metres apart, the Okayama University Hospital and the Misasa Onsen Hospital are located in the hamlet of Yamada on the north side of the river. This is an area characterised by high concentration of hot springs that are the necessary prerequisite for the practice of Balneotherapy with its high demand for natural mineral water. These two hospitals are a recent addition to Misasa but, although they have very different history, their medical practices related to Balneotherapy are similar. The differences between the two Misasa hospitals in terms of treatment facilities and methods used are also very small and will therefore be pointed out only when necessary. The medical teams of both hospitals include many specialist balneologists, i.e. physicians who have taken a three-year long specialist course in Balneotherapy as an additional part of their medical degree. According to these physicians the course was based on European balneological theory. The continuing links with European Balneotherapy are also evident in other areas. For example active professional contacts exist between the Misasa specialists and some European balneologists maintained via conferences and exchange visits. In the case of the Okayama University hospital there are contacts with Bad Gastein in Austria, a fashionable European resort well known for its radon inhalation therapy that takes place in deep tunnels left over from previous mining activity, the so called 'Gasteiner Heilstollen' or 'healing tunnels', <http://www.gasteiner-heilstollen.com/>.

5.2.1. Okayama University Hospital

Despite the significant distance from the city of Okayama (just over 100km of difficult mountainous terrain) the Okayama University hospital was established in the 1930s as an integral part of Okayama University's expansion plan. Its task was to conduct

research into the possible application of the local radioactive thermo-mineral springs. The theoretical part of this project has grown into an internationally recognized 'Institute for the Study of Earth Interior' (sic), (formally Institute for Thermo-Spring Research), and the applied part has become the hospital. The University started planning the addition to its Medical School in 1933 but it was not until 1937 that it received both the land and the permission to build on the site of the present hospital. The facility was first opened on 28th July 1939 as a major tuberculosis convalescent sanatorium and a Research Centre investigating the practical applications of the use of radioactive *onsen* water (Mifune, 1980). Following the 1949 reorganization of Japan's University system (Duke, 2009) the sanatorium part was turned into a branch hospital of Okayama University Medical College which in 1965 became a teaching hospital.



Figure 17: Okayama University Hospital.

The hospital owns three thermo-mineral and one cold-water spring, the combined waters of which are used in the hospital *onsen* baths (*o-furo*) as well as in filling the exercise pool.

Hospital Management

The current economic downturn, together with the recent changes at the top level of the hospital management, is reflected in some major changes in the running of the hospital. First of all the size of the hospital was between 2006 and 2009 gradually reduced from 120 to 70 beds which was reflected in the reduction of medical (and other) personnel. Currently (2009) there are four full-time physicians, all living locally, and three part-time physicians who come for two days each only all the way from Okayama. There are also two full-time physiotherapists. The introduction of part-time physicians was a very recent development that happened in the interval between two periods of my fieldwork. This arrangement is certainly not welcomed by the two physicians who weekly have to face the long, and in the winter difficult and due to snow often dangerous, drive through the Chūgoku Mountains.

Another sad manifestation of the lack of resources is the state of the hospital-owned footpath. This attractive path was cut into the almost impenetrable jungle that covers the steep hills rising immediately behind the hospital in order to encourage patients to take more walks. The path was well kept, the pretty little hexagonal summerhouse that perched on the rocks about half way to the top was clean and welcoming, and the flowering Japanese azaleas and other vegetation carefully tended. As exercise forms an integral part of Balneotherapy and as most of the available paths in the village keep to the flat area of the valley, this path was one of the few opportunities patients had to engage in a very different type of exercise i.e. walking up hill. On my last visit I found the path badly overgrown and unkempt and, judging by the state of its maintenance, or rather the lack of it, clearly not used. The official explanation of the dilapidated state given to me by the Management was that since my last visit a poisonous snake was found on the path and, as a result, the path is no longer advertised, or maintained, by the hospital. The Ground Maintenance staff version however is that this reflects the

lack of resources that forced a reduction in their staff numbers to such an extent that only the most visible parts of the grounds in the front of the hospital can now be properly looked after.

Patient access to the Internet is another facility that has suffered from lack of funds. Although limited, there was access to the Internet during my first period of fieldwork in 2006. There was a single terminal located in the Day Room that was available to all patients. It was connected to the Internet and paid for by the hospital. It was at the time of my visit heavily used by patients, chiefly for emailing. By the time I returned in 2009, however, the terminal was gone. On enquiry the Management admitted that they could not afford to renew the connection charges. At the same time they tried to justify this change on medical grounds. Their argument was that using the Internet interferes with an important part of the therapy i.e. with taking enough rest. How this was viewed by the patients is discussed in Chapter 6.

Apart from the various measures taken because of the decline in the economic climate most of the other changes in the running of the hospital that have occurred between my two visits, and that affect the patients' experience, are related to the changes of personnel at the top level of the hospital Management. The replacement of both the Director and his Deputy has resulted in the introduction of many new practices not all of which are popular with the patients. These include changes in the rules governing the taking of meals in the communal dining room and the limitation of the freedom of movement concerning evening outings outside the hospital grounds. I was told that there was an accident involving a patient who was taking an evening walk in the village. As the hospital is expected to be responsible for patient safety at all times and in order to prevent this happening again new and very strict rules governing patients' evening movements have been introduced. The doors are locked at seven o'clock and all

patients are expected to stay inside from then on. This was a situation with which many of the male patients were not happy.

Changes governing meal arrangements are also unpopular with many patients, especially those occupying the few private rooms available. They are now expected to eat all their meals in their rooms while those in the 4-bed rooms can continue eating their meals in the dining room. Several of the private patients who have been here before expressed their dismay at the change and stated a strong preference for eating away from their rooms. It allowed them to leave the limited environment of their room and to have more contact with other patients. In fact, during my last visit two women chose to be moved from their respective private rooms to shared rooms so that they could escape the isolation they felt was imposed on them. There seemed to be no freedom of choice in this matter; the rules were inflexible even to the extent that a husband and wife, both patients, one of whom was in a private room and the other in a 4-bed room, were not able to take meals together.

The layout

The hospital ground floor houses most of the public areas i.e. the reception, the consulting rooms and most of the treatment rooms e.g. the hot-clay room or the hand/foot treatment room. This is also where the physiotherapy unit and the patients' Day Room are located. And this is where one will find the two water-based facilities i.e. the hospital exercise pool and the traditional Japanese *onsen* baths or *o-furo* to which every patient gravitates at least once a day. The lines of shoes in front of the *o-furo* doors bear silent witness to its use all day and well into the evening. There are two bath areas, one for men and one for women. At the far end of the corridor is the Day Room which is one of the very few communal areas available to the patients. It provides a comfortable and peaceful environment for patients to socialize, to rest

and/or to meet visitors. The room is furnished with easy chairs and coffee tables, and has a small fountain into which drinking water is pumped directly from the thermal springs and cooled before being available for drinking. There are daily newspapers and a small bookshelf full of mainly *Manga*³⁰ books. One large corner is occupied by a small hospital shop selling basic toiletries, stationery and a limited amount of non-perishable food. Three out of the four walls of this light room are made of glass which allows a more or less uninterrupted view of a small, but well-kept, Japanese garden. It contains interesting trees and shrubs, and includes a delicate bridge spanning a small pond which is well stocked with colourful *Koi* (carp). This room, despite its comfortable furnishings and pleasant outlook and atmosphere, appears rather under-used at most times of the day with usually only two or three people present. The top floor of the hospital houses a well-equipped laundry room and also offers access to the spacious roof terrace with clothes lines for drying clothes, a well-used facility in good weather. This terrace, which offers views over a large part of the entire valley, also provides a pleasant place to walk. Those who are not able or allowed to go out of the hospital often do their prescribed amount of walking here. It provides a pleasant alternative to doing their walking exercises along the inside corridors. The three remaining floors house the hospital administration and the wards. This is also where all the remaining, more specialized treatment rooms are found. The clinical part of the hospital is well guarded by the 'Nurse Station', the substantial suite of rooms that form the gathering place of the nurses. This is the real nerve centre of the establishment, the hub where medical records of current patient are kept, and everything that goes on in the hospital is noted and processed. This is the gateway to the patient rooms and the nurses make sure that only those who are eligible go beyond this point. As I was not one of the eligible people it was very difficult, although in the end not impossible, for me to visit any of the participants on a casual basis in their rooms.

³⁰ Japanese comics.

Patient accommodation

Patient accommodation is of two general sorts - private and shared. Private rooms are all single occupancy and require a substantial supplement to be paid by the patient. The shared rooms are occupied by four people and paid for by their health insurance. Each patient has a bed, a bedside cabinet topped with a small television set, and a narrow wardrobe for clothes. This applies to both the private and the shared rooms. The difference between them is based on privacy and, more recently, on the way meals are taken.

Eating arrangements

The dining room, where those that are allowed to take their meals communally eat, is on the first floor. This is a bare room, the furnishings consisting of Formica-topped tables just large enough to take four meal trays, and plastic chairs. There is a sink, a large drinks vending machine and a television set that is mounted high up on the wall in one corner. The opposite corner houses a wooden table with a few board games, mainly “go” and “shogi”³¹. Just before the set mealtimes (8 am, 12noon and 6pm) the kitchen staff will bring food on trays individually marked with patients’ name and distribute them around the tables. Unless there are many people eating the kitchen staff place set one tray per table. Patients bring a set of their own chopsticks and often their own mug for water. They mostly eat on their own in silence while watching the TV which is always switched on at mealtimes. When they finish eating they take their trays out, place them on the trolley outside the dining room and leave. There is very little talking done during meals which are usually taken very quickly.

³¹ Japanese Chess – a two-player board game.

5.2.2. Misasa Onsen Hospital

Recent history shows that *onsen* have been places well suited to the recuperation of soldiers (Bälz, 1932; Reid, 1929). In 1937, during the Second Sino-Japanese War (Hall, 1988) and following the “Chinese incident” (Nanjing), the Japanese Government requested its prefectural³² governments to help it deal with the large numbers of wounded soldiers coming back from the war. It asked the prefectures to find land that could be made available in some of their *onsen* for the building of recuperation clinics. Tottori prefecture offered Misasa as a possible site for such a clinic, and it was Misasa Onsen, a small section on the edge of the town’s territory, that came forward with an offer to provide the necessary land (Mifune, 1980). The plan was put into immediate effect with the surrounding villages being asked to provide timber and labour. The original hospital with its 100 beds was finished and opened in 1939. However, it was not used exclusively for wounded soldiers. Tuberculosis had been rampant in Japan for many decades by then (Bowers, 1980; Jansen, 2000; Low, 2005), and the next thirty years saw the hospital being used as the National Tuberculosis Sanatorium as part of the fight against TB. As tuberculosis levels in the population declined after the Second World War the main focus of the hospital shifted towards treatment of other illnesses. It gradually started admitting general patients, but also while using Balneotherapy concentrating on problems connected with various locomotion functions (Mifune, 1980). Currently it also provides an Accident and Emergency service for the area.

³² Japanese administrative district; ‘a county’. There are 47 prefectures in Japan.



Figure 18: Misasa Onsen Hospital.

While the Management of the Okayama University-owned hospital discussed above is facing severe lack of resources the Misasa Onsen Hospital has recently experienced something of a major revival .Although in the 1990s it also went through difficult times at that point it was bought by the Japanese Medical Association -or *Ishi-kai*- , a private professional medical association of Japan, which has since turned it into a thriving private general hospital. The hospital employs ten full-time and ten part-time physicians as well as twenty physiotherapists who work in its vast ‘Rehabilitation Centre’. It owns five thermo-mineral springs that are used both to fill the treatment pool and for bathing in the *o-furo* baths.

Although there are some differences, mainly on the management side of the institutions the two hospitals share many characteristics especially in the type of medical care they provide.

5.2.3 Treatment procedures

Misasa’s Balneotherapy that is based on the local natural thermo-mineral spring water is a complex therapy is made up of several elements not all of which are necessarily applied to all of the patients. Depending on the particular medical condition of each patient their physician will recommend the use of certain ‘pieces’ of the mosaic of

procedures that are available to him. Thus apart from the purely water-based component i.e. the daily immersion and exercises in the hospital pool, there are supplementary procedures that include physiotherapy, locally applied hot clay treatment and the localized treatment of hand and/or foot problems. These procedures are further supported by several other elements all of which are considered to be vital for the success of the therapy. These are good nutrition, gentle exercise, i.e. walking, and plenty of rest.

The pool at the heart of the therapy

Water from the local hot springs is used to fill the hospital swimming pools as well as the *o-furo* baths which the patients use daily for cleansing. The pools are mixed-sex pools, 10m long and about 1m deep, and are designed primarily for walking rather than swimming. The water's natural resistance to movement is increased by strong jets of water that enter the pool in the opposite direction to the one in which the patients are walking. This makes it harder to move forward and is therefore more beneficial for improving muscle strength. In each round of the pool the users stop at several points where they perform several repetitions of a special exercise before moving onto the next stop. Each patient is given a summary of the types of exercise and the numbers of repetitions of each they should do. The water is kept at 34°C, and the pools are available all day until 6 pm. They are emptied and refilled with fresh spring water at weekends. Of all the components that together make up the therapy it is the exercises taken in the pools that are seen as the most important element of the treatment and are prescribed to all patients. Patients use the pool on a daily basis, some even more than once. In contrast to most of the other procedures which have to be booked for a particular time, patients' use of the pool is self-organized i.e. the time of its use is at their discretion. This does give them certain amount of freedom as to the amount of time they spend doing the exercises.

Although exercising in the pool is an unsupervised activity, for safety reasons a system of monitoring the use of the pool has been developed. This is an ingenious, simple and effective system based on colour-coded double-sided (white/red) plastic name tabs which are arranged by room numbers and displayed on the inside of the Reception door in full view of the nurses. All the current patient names are written on the white side of these tabs that are arranged in lines on the door. As patients pass the Reception door on their way to the pool they are expected to turn over their name tag to display the other side of the tab which shows their name in red thus making it stand out from the rest. It seems that all patients co-operate with this system because, according to the nurses, nobody ever forgets to 'sign in' when using the pool. The arrangement makes it easy to verify with a single glance how many patients are in the pool at any one time. This display is regularly checked by the nurse on 'pool duty', a job that they take in turn.

The Misasa Onsen hospital uses an extra piece of equipment which enables patients with severe mobility problems to use its pool. This is a small crane-like structure that will lift patients from their wheelchair, turn them 90°, and lower them into the pool. Once in the water, and helped by the water's buoyancy and temperature, even these patients are able to walk around the pool and perform some of the exercises. By the end of their session of perhaps 30 minutes the mobility of most these patients will usually have improved to such an extent that they are able to leave on their own accord using the shallow steps at the far end of the pool.



Figure 19: Patient being lowered into the exercise pool.

Supplementary procedures

❖ Application of hot clay or *doro*

This simple procedure is used for the relief of pain in specific joints, usually elbows and knees. It involves the use of special, fine brown clay that is heated to 90°C. Wrapped in several layers of cotton fabric small parcels of hot clay are applied to sore joints for about a 30 minutes-long period.

❖ Hand/ foot treatment

Many patients also come here to be relieved of arthritic pain in their hands and feet. For this they make use of specially adapted small bathtubs that allow full immersion of the extremities only. The treatment itself consists of a ten minute exposure to the hot spring water.

❖ Physiotherapy

Both hospitals include sizeable physiotherapy departments with many different types of equipment. Some of the physiotherapists are specialists in just one part of the body, e.g. the hand. These usually work on a part-time basis, coming in only when needed.

❖ Sauna

Okayama University Hospital offers an extra, and with some patients very popular, type of treatment. This is available to all patients but only taken up by a relatively small number all of whom claim that it is the one procedure that really helps them feel better. The hospital owns a natural sauna, a facility which it makes available on two afternoons a week at certain times of the year. This resource has belonged to Okayama University since the nineteen fifties when it was purchased from its previous owner – the Nisakki Hospital in Tokyo. The sauna is located in the very centre of the oldest part of the village on the south side of the river where it is close to one of the two oldest *sentō*, the so called *Naka-yū*, the public open-air foot bath, and the small shrine that houses several images of Yakushi Nyorai, the Buddha of Healing. This is also where the spring water temperature is high (around 55°C) and where it comes up relatively close to the surface. The sauna is accessible via an old narrow house in which it is necessary to descend about 4 meters down a steep staircase to the basement floor which is in fact about the level of the river. This is the level at which several thermal springs rise to the surface and supply the basement baths found in some of the houses in the vicinity of the sauna. The naturally heated water is in the sauna used not as liquid but as a source of heat. The aim is to produce steam. The sauna can only be used for about four months a year i.e. during the rainy season when, as a result of heavy rainfall, the underground water level rises, comes close to the surface and heats the sauna floor. At the end of the rainy season when the water level drops again the sauna loses its heat and stops being used until the start of the next rainy season a year later. The sauna sessions take place in a very small underground room with a low vaulted ceiling where there is just enough space for eight narrow beds. Patients, accompanied by a nurse, are brought here by bus on two afternoons a week. After they have changed into swimwear and comfortably settled on the beds the nurse, using a very large container, pours water onto the hot floor. It immediately starts evaporating and

producing steam. The nurse monitors the temperature and tries to keep it constant by repeatedly pouring water onto the floor. Each of these sessions lasts thirty minutes.

Additional elements of therapy

The remaining components of the therapy are special diet, light exercise and, finally, but not less importantly, rest.

❖ Exercise

All patients are prescribed a certain amount of exercise which is seen as a crucial element of spa therapy. It helps to increase muscle strength and circulation and aids mobility. The amount and the sort of exercise vary from exercises in the pool to a certain amount of walking that is usually done outside the hospital. However, even those who are not able to go outside either because they are not strong enough or well enough or because they need some sort of walking aid e.g. a walking frame, are expected to take exercise. They are usually prescribed a specific distance they need to walk. To make it possible for the patients to achieve the set target the hospital has introduced a simple measuring device. The long corridors and the roof terrace display a 10cm wide scarlet strip that has been inserted into the entire length of their surfaces. Marked in five meter segments the strips enable patients to keep track of the distance they travel while doing their walking inside.

Those not confined to the hospital wards do their exercises outside. The scope for walking in Misasa is limited by both the terrain and the vegetation. The hills are very steep and the vegetation that covers them far too dense and impenetrable for proper hill walking to be a possibility. There are a few remains of old pathways that used to connect the numerous local valleys but these are generally no longer maintained and most become impassable often within just a few tens of meters of their entrance from

the main road. Walking is therefore confined to the narrow strip of flat land that runs alongside both sides of the river. That is where most of the hospital 'walkers' go. They usually follow the river footpath from the outskirts where the two hospitals are located into the old part of the village with its tourist shops and rather expensive cafes and small restaurants, before turning to come back. This seems to be a solitary activity for most people and patients generally take these walks on their own. There were two reasons for walking alone mentioned by the patients. The most common one was that one can walk at a time of one's choosing and the other that one can go at one's own speed.

❖ Diet

Both hospitals employ specialist dieticians to plan all patients' meals. The calorific value is carefully calculated for every patient, and allowances are made for individual patient's needs, e.g. for those with diabetes or with blood pressure problems. Diabetic patients whose symptoms are not too severe are at the same time being educated in how to control their illness by dietary means alone. Food is one of the topics raised by most participants during interviews. It is generally enjoyed and seen as an essential part of the wellbeing many of the patients here feel. Many of the women lost weight while staying in the hospital which they felt was good for their general health and also for their mobility.

❖ Rest

Rest is seen as not just an important but as an essential element of the therapy. Misasa's patients are encouraged by their physicians to take as much rest as possible. Outside the times when patients are engaged in some medical procedure e.g. exercise in the pool or walking or having a physiotherapy session, they are expected to sleep, to sit quietly in the Day Room or simply just lie on the bed in their room, resting. Any other activity is frowned upon, including being interviewed while participating in this

study. It was often very difficult for me to meet up with some of the participants as the nurses were alert to anyone trying to disturb the rest their 'charges' were expected to be taking. As we saw already in the Management's attitude towards the Internet, anything that would interfere with the amount of real rest the patients take is discouraged.

5.2.4 Summary of Misasa's medical setting

Balneotherapy is in Misasa practiced by two local hospitals. The therapy is built around a total immersion in water pumped in from the local thermo-mineral springs, and supported by several other medical procedures as well as a variety of supplementary therapeutic elements e.g. rest, outdoor walking and diet. The characteristic qualities of the local mineral water are believed by both the patients and the doctors to make it suitable as a medium for healing in cases of certain medical problems. Misasa hospitals management and medical staff while trying to provide an efficient and pleasant environment for their patients impose strict rules governing their freedom of movement outside the hospital boundaries.

5.3. Jáchymov Spa Houses

Misasa Onsen's ancient and modern history, its temples and shrines and its economy, in other words its entire social structure, has been closely related to the existence of the local natural springs and the various aspects of their use. When we turn to the second field location, Jáchymov Spa in the Czech Republic, we find that its associations with the locally available natural mineral springs and their use in healing are only the latest chapter in the town's long history, in fact a chapter that is of a relatively recent origin. From the time of its beginnings this has been first and foremost a mining town whose entire existence has been built on mining activity, even if what was actually

being mined at any one time was changing. Significantly, the town's patron saint is Saint Barbara, the patroness of miners. The small baroque chapel dedicated to her was built in 1770 and stands at the town entrance (Figure 20).



Figure 20: Chapel of Saint Barbara in Jáchymov.

Small images of Saint Barbara can also still be found in niches carved into the walls of the underground corridors of the only remaining mine. Although all the mining activities have now ceased it is important in the current context as it is as a result of mining that the 'healing springs' were discovered here. Chapter 4 gave a brief introduction to the history of Jáchymov from its origins until the discovery of the mineral springs. The following section outlines how this discovery transformed the mining town into its current state i.e. into a spa.

5.3.1 The story of the 'healing water'

What makes Jáchymov celebrated today as 'The first radon spa in the world' began in 1864 with a chance discovery. While mining uranium ore from ever deeper levels a strong and very much unwanted spring was struck. Its flow could not be stopped and, as it flooded the lower parts of the mine, mining there had to be abandoned. For safety reasons, however, this partially submerged area of the mine had to be regularly inspected which was done by retired miners, who were usually full of aches and pains. After a while these miners reported that, following their regular contact with the

underground water, the chronic pain in the joints of their knees and feet disappeared. They therefore claimed that the water had healing properties. The story of this 'healing water' soon spread and the town began to be talked about as '*the town of living water*'. It did not take long before an enterprising local tradesman, Mr Kuhn - the town's baker, exploited the situation by providing a special 'living water' healing facility to paying customers. They could take a bath in his house on the square for which the water was brought in from the mine by one of the old retired miners in a specially adapted pail (Hornátová, 2000).

Figure 21: Spring water being transported in a covered pail.
(Courtesy of Jáchymov Museum).

The fame of the water rapidly spread and it soon became necessary to provide much more than just one bath. Several baths were therefore installed in specially built cabins in the, by now disused, paint factory located in the lower part of the town. The demand for the 'healing spring' water had by then risen so much that underground pipes had to be laid between the source of the water in the mine and this new facility. The area gradually started transforming itself into a spa quarter which in 1912 saw the

opening of the first large spa house. The late Art deco structure, or 'Radium Palace', was built to be as luxurious as was possible at the time (Fig.22).



Figure 22: Radium Palace, a Spa hotel in Jáchymov.

The increased popularity of the local spa therapy seen in the earlier part of the twentieth century also stimulated the building of other accommodation facilities, mainly small but elegant private pensions. This new and high quality housing, an example of which is seen in Figure 23, contributed to the town's atmosphere of a place of not just therapy but also comfort and relaxation.



Figure 23: Spa residences dating from the early 20th Century.

5.3.2 The patients

Most of those who come primarily for treatment suffer from disorders of the locomotory system or illnesses of the peripheral circulation, i.e. problems similar to the patients who visit the hospitals in Misasa. Jáchymov also specialises in treating those suffering from ankylosing spondilitis (AS), a systemic chronic inflammatory hereditary disease. There is no known cure for this problem but certain courses of action can slow down its progress and reduce pain. Jáchymov offers procedures doing just this and is recommended for AS sufferers by several members of the AS International Federation. As a result, one comes across many foreign sufferers, all of whom have to pay for the treatment. For Czech citizens however Balneotherapy is available on recommendation by a physician and is open to all, and its basic cost is covered by the patient's medical insurance. This covers three treatments per day and accommodation in twin bedrooms. Those who wish to receive more treatment or to be accommodated in a single room need to pay a supplement.

5.3.3 The spa houses (hotels cum hospitals)

Jáchymov Spa's Balneotherapy is currently practiced within three large structures that were originally called sanatoriums but are now labelled spa houses (Lázeňský Dům), and known by their names: "Radium Palace", "Akademic Běhounek" and "Curie". Although they differ in the degree of luxury they offer (with Radium Palace being the most luxurious) the way they organize and practice the therapy is identical. The change in their official title, as well as their ownership, came in the wake of the political and economic changes that followed the Czech 'Velvet Revolution' in 1989. Under the communist regime these establishments were wholly owned by the state run medical care system and completely reliant on what seemed like an unlimited amount of state funding. The spa is currently run as a private, but at the same time still partially state-subsidized, complex, and in this new economic climate it has had to learn to face new

realities. It is expected to be financially more or less independent, and in order to do that the Management needs to attract users. The new Management team have decided to move away from the original categories of 'sanatorium' and 'patient' and the rather negative images these concepts often conjure up. They needed to stress the more positive side of the spa and move away from its associations with sanatoriums as 'places of illness and convalescence' and images of 'people who are convalescing or have a chronic illness' (Oxford English Dictionary). The spa houses have been renamed 'spa hotels' (Lázeňský Dům), and the spa users are no longer labelled 'patients' but have been re-classified as 'guests' or 'clients' (hosté). Despite this change in the official labelling the physicians currently working in the spa still discuss the subjects of their care as 'patients'.

Another new development that corresponds with the general attempt to make the spa financially viable is the introduction of short-term so called 'wellness' packages. Those who feel their health would benefit from a brief visit to a spa while receiving a few spa treatments can choose to come here and pay for one of these packages. These visitors who come primarily for relaxation without a recommendation by a physician remain firmly outside the formal medical realm of the spa and therefore of this research. If they need to be mentioned here then 'spa guests' or 'clients' will be the labels applied to them.

5.3.4 Spa house management

While Misasa patients are admitted to a purely clinical facility the patients in Jáchymov check into what on first sight looks and feels like a conventional hotel. The reason lies in the physical organization of the houses each of which consists of two distinct parts fulfilling two separate functions. One part, the accommodation section, is run like a

hotel while the other part operates as a medical institution. The reception, the physicians' consulting rooms, most of the treatment rooms plus all the public/social areas e.g. the lounges and the television room take up the lower floors of each establishment while the floors above form the hotel-like accommodation section. The rooms are mostly double rooms, and all have on-suite bathrooms. Single rooms are available for supplementary payment.

The spa is able to treat more patients than these three spa houses can accommodate, which creates a shortage of beds. To overcome this problem many patients are housed in pensions similar to those shown in Figure 23. These places offer accommodation only and so patients need to walk to one of the main buildings for all their treatment. The core of each one of the Jáchymov spa houses is occupied by a large public area that is used by all the guests at some stage during the day. These are basically large hotel lounges and as such designed to be welcoming and relaxing. They are furnished with deep armchairs and small coffee tables, and subdivided by movable screens and/or greenery into many smaller and more intimate spaces. These common spaces are the 'town squares' of each of the spa house, the space for meeting people and for socializing during free time and in-between medical appointments. For me these spaces were very valuable as they made it easy to meet patients on an informal basis and to recruit or interview participants.

5.3.5 Medical procedures

The majority of patients coming here are seeking relief from chronic pain. The main method of treatment is total body immersion in the local natural spring water. While in Misasa this happens in the hospital pools these are here replaced by specially adapted deep bathtubs in which patients daily take a 20 minutes-long bath.

The spring water that supplies the about 20000 baths per months originates from three springs rising in the disused Mine 'Svornost' (Concord or Unity) situated about two kilometres above the spa. The waters of these springs are mixed at the source and reach the spa by underground pipes. Although warm, the water in Jáchymov does not classify as thermal. While at source the water temperature is around 37°C by the time it arrives in the spa this will have dropped to only about 26°C, and has to be heated to the desired temperature for the baths i.e. 37°C (Burachovič and Wieser, 2001). The radon content of the spring waters varies with volume between 4 and 20 Bq but once mixed the level is around 5Bq.

The bath as the main healing component

The daily immersion in a deep bath represents the main healing procedure in Jáchymov. In order to achieve the desired healing effect the physicians recommend a minimum of eighteen baths to be taken. Given on consecutive days this number therefore determines the required length of effective stay in the spa i.e. three weeks. This also coincides with the period that has, so far, been covered by the Czech health insurance.

Each bath session lasts twenty minutes and takes place in bathtubs that have been specially adapted to maximize comfort for the duration of the treatment period. Many patients mentioned that this procedure is so comfortable and relaxing that they often fall asleep during it. According to the proponents of the hormesis theory twenty minutes-long immersion in the spring water allows patients to receive the maximum amount of 'good' radiation while minimizing the extent of harm it might do (Calabrese and Baldwin, 2003; Erickson, 2007b; Franke *et al.*, 2000).. Patients are asked not to move but to remain as still as possible while using the bath. This, according to the Jáchymov's physicians, is in order not to disturb the water unnecessarily. I was told that this is to minimize the release of radon gas that might be breathed into the lungs.

Supplementary procedures

❖ Hot paraffin treatment

Jáchymov does not have access to the special fine clay that Misasa hospitals use for pain relief of localized inflammation. Instead, several layers of hot paraffin are gradually applied to the affected joints with a similar effect.

❖ Massage

In place of physiotherapists Jáchymov's has a large team of masseurs many of whom specialize in treating specific parts of the body.

❖ Local Application of Radioactive Material

Radioactive material can be used for localized chronic pain that often restricts movements. This treatment is most commonly given to patients suffering from pain affecting the lower back or hips, and only if the pain does not result from the presence of tumour. Consent Forms have to be signed by all patients who receive this treatment prior to the procedure.

Radioactive salt pellets containing different doses of radioactive material are kept in a large lead container in a separate building located on the edge of the spa. The position of the pellets within the container is mapped according to their strength and they are accessible only by the use of a mechanical arm that is manipulated by a technician working behind a lead screen in a separate room. The dose a patient will receive is determined by the chief physician who has been working in this capacity for many years. Prior to the application the precise location where the radioactive material will be placed is marked on the patient's skin. A small matchbox-sized applicator is then taped onto the marked position before an operator, using the mechanical arm, selects the appropriate dose from the lead-lined container and remotely inserts it into the

applicator. The applicator stays attached for about 4 hours which patients spend resting in complete isolation in a separate building.

Additional elements of therapy

❖ Diet

Diet does not seem to play as important a part of the overall therapy here as it does in Misasa. Although there are nutritionists working in all the spa houses, the exact calorific value of meals is not calculated for each person. The meals are very much the standard Czech fare of rather heavy food which tends to be high in carbohydrates and meat often accompanied by rich sauces. Neither the quality nor the quantity of food was raised by any of the participants during the interviews.

❖ Rest

Rest and exercise are important contributors to the system of healing in both spas but the two locations put different emphasis on the role of these elements. As described above Misasa physicians really stress the importance of rest. This may partly reflect the fact that a large amount of exercise is already taken during the main part of Misasa's therapy, i.e. immersion in the pool. Jáchymov's patients are also expected to rest and many patients in fact comment on "needing a rest" as the therapy makes them tired. Most patients mentioned feeling exhausted especially during their first week. This they felt was partly due to the altitude and the amount of walking they needed to do between the many parts of the spa. On the other hand, as the main constituent of the therapy, or the twenty-minute bath, is in fact restful rather than active, prescribed rest assumes less significance here. In contrast, the emphasis is on exercise which is being strongly encouraged for everyone except those whose mobility is severely restricted.

❖ Exercise

Exercise is in some special cases prescribed but for the rest recommended. It is helped by the way the days are structured to allow enough time for physical activities. Apart from some specialized procedures most of the treatment periods are timetabled to be finished by lunchtime leaving the afternoons free to be spent in some, usually gentle, active way.

An example of the extreme amount of exercise people take in the spa are the ankylosing spondilitis sufferers. They are prescribed an enormous quantity of quite vigorous exercise of many different sorts from brisk, long walks to 'working out' in the gym or swimming. As exercise is believed to be one of the few lines of attack that might slow down the progress of this incurable disease these exercises are carried out diligently by all those affected. The rest of the patients generally use two gentle modes of exercise i.e. walking or dancing. Both are very popular and both are done in small groups of varying sizes but virtually never individually.

Jáchymov is ideally situated for walking. The small town itself offers numerous well kept, although steep, paths but many people prefer to take walks in the mountains that surround the spa on three sides. They usually take a bus that leaves very soon after lunch and that takes them several kilometres further up the valley. They then walk back down using one of the many beautiful routes on offer. Each one of these routes passes strategically well placed restaurants or cafés where the walkers usually stop and have a drink.

The second type of exercise recommended by the physicians is dancing. The three spa houses take it in turn to put on an afternoon or an evening dance which means that there is plenty of opportunity for all to take part in this activity on a daily basis.

5.4 The outcome

Patients using spa therapy in either spa are looking for relief of pain that accompanies the chronic illnesses they are suffering from. For the spa therapy to be considered successful it will need to show that there has been a reduction of the pain and therefore an improvement in the quality of the patient life. This quality cannot be measured objectively. We can only judge its degree from the subjective and unquantifiable reports given by the therapy users.

Almost 90% of the participants, when leaving from either spa, reported a “positive outcome” which they expressed by talking about their lack of pain and their feeling of well-being. As Kleinman however points out there are known instances of patients claiming satisfaction with the treatment they have received despite symptoms persisting (Kleinman, 1980). This study found one quantifiable parameter which could be used to indicate the extent of success. This indicator is the difference in the amount of painkillers taken by a patient arriving to start the therapy and the amount taken at the point of leaving. Most patients stated that at the time of discharge they were taking significantly lower doses of painkillers. Some even stopped altogether. Unfortunately, as we are dealing with chronic illnesses, the loss of pain is usually temporary and, according to the participants, lasts for anything between four and six months. Many of those interviewed confirmed that they needed to return on an annual basis.

5.5 Summary

This chapter focused on the medical institutions in the two spas, the system of Balneotherapy they use in the treatment of painful diseases and their styles of management. While many similarities were found between the two locations, including the most important one of successful outcome, I also found many differences.

These differences fall into two main areas. First of all there are those that reflect the distinctive styles of management of the medical institutions. These include the type of information that the Management gives the public about the spa and the degree of control that it imposes on the patients. The second set of dissimilarities includes variations in the medical procedures that collectively shape the therapy and the theory that lies behind it. Although the physicians in both spas support the theory of hormesis, some aspects of the bathing methods used in the respective spas are sufficiently different to suggest that the physicians do not hold identical views on the effects of radon present in the spas mineral water. These differences are seen mainly from the mode of immersion. While in Misasa the patients exercise in the radon-rich water in Jáchymov they are required to stay as still as possible.

The above differences have a significant impact on the culturally constructed experience of the spa which is what the next chapter will concentrate on. It will look at the patients themselves and investigate the way they classify and order their 'spa world'. Based on patients' narratives it will focus on their beliefs, expectations and perceptions of the therapy, as well as on their likes and dislikes and their role in the process. It will examine how they order their days within the two systems, how they co-operate with their treatment and what they see as the contributing factors of the positive outcome of Balneotherapy that most of the patients report.

Chapter 6 – The spas as the patients see them

The previous two chapters covered the physical and economic environment of the two field locations and described the system of Balneotherapy provided by the medical institutions found there. This chapter will focus on the lived experience of the consumers of this therapy i.e. it will look at the therapeutic process through the eyes of the patients. Using the patients' own narratives about their lives in the spa it will bring to light the many categories that together make up their spa encounter and the effects these categories may have on the overall experience and the resulting medical outcome.

The patient experience of the spa can be visualized as a set of concentric spheres where the many external factors over which a patient has no control form the outside layer and the closer we get to the centre of the sphere the greater is the extent of personal involvement and the possibility of influencing both the experience and the outcome. The outer sphere is represented by the political, economic and financial constraints imposed on the healthcare system and by the organization of the spa i.e. factors that directly or indirectly affect almost every aspect of the life in the spa. The next layer includes the medical aspects i.e. the treatment procedures and the position of the physicians and their culturally constructed knowledge of the type of medicine they practice in the spas. The third or inner layer covers the culturally constructed behaviour and experience of the patients. It comprises the patients' health beliefs, the way they plan and spend their days, their attitude towards the prescribed regime and their co-operation with it as well as any other types of behaviour that may affect their experience of the therapy. The boundaries between these layers are not rigid. Thus changes in the top layer e.g. changes in the political system of a country might affect the ownership of the spa and with it the type of management which might in turn influence the system of therapy. The culturally constructed knowledge the physicians

gain during their training is also subject to some of these external factors and might, in turn, influence some of the decisions made by the management. Their knowledge certainly affects the inner layer i.e. the patients. This research focuses on this final layer the content of which will emerge from the patient narratives.

The purpose of coming to a spa is to improve one's health. In order to do that the spa provides medical facilities which have to be managed in such a way that they make the maximum use of their natural resources, in this case the mineral springs, and operate within their financial constraints. The two spas considered here are run using very different styles of management which is reflected in many aspects of the daily lives of the patients who need to adjust to the system and organize their lives within it. I propose to describe their experience of the therapy as fitting into two main categories of influence labelled the 'formal' and the 'personal'. The first comprises the structures and activities managed by the hospitals and imposed onto the patients. These cover the general management including provision of all the treatment episodes, the eating arrangements and the amount of freedom available to the patients outside the treatment periods. These have to some extent been covered in the previous chapter. The second category covers the active involvement of the users in the therapy. It includes the patients' cooperation with their treatments and the way they choose to organize their free time i.e. the time that is outside the formally organized structure.

The chapter will open by describing who the users of this therapy are and the route they have taken to arrive in the spa hospital. How did they gain access to this type of therapy within their medical systems, and was the route a direct one or one that came at the end of several other attempts to regain health? As Kleinman and others points out patients often have only vague ideas of many aspects of their illness (Janzen, 1987; Kleinman, 1980). They act within systems of symbolic meanings that are found in all

societies as a socially organized response to disease (Good and Delvecchio-Good, 1992; Kleinman, 1980). As people acquire knowledge about these meanings they construct their own illness realities and learn to interpret, negotiate and construct illness realities in a society-wide context. The culturally positioned beliefs are initially based on the patient's own experiences or on the experience and advice of their close family and friends. If they choose to seek help from medical practitioners their opinions might be modified as a result of the expert information received. Aspects of all of these influences can be found in the spa patients' narratives.

The next topic will be the patient-centered comparison between the two spas. It will focus on how the patients cooperate with the management of the spas and how they deal with the constraints the various rules laid down by the management impose on them. The doctor-patient relationship will also be examined in this context in order to highlight the role of the doctor in the way patients in each location construct their experience of the therapy. I will look at how the doctors' clinical training and professional confidence manifest themselves in their narratives and the way this contributes to the cultural construction of illness in the local cultural context (Delvecchio-Good and Good, 2000).

I will next examine the period of stay in the spa as a type of van Gennep's rites of passage that shows the basic tri-partite structure that accompanies a transition from one state to another (Gennep, 1960). The transition here is that of an ill person separating himself from the usual society by entering the spa followed by his or her experience of the spa treatment, and finally leaving to re-enter their society in a new, hopefully healthy state.

The final section this chapter will deal with the patients' free time or with the 'personal' aspect of the system. This will try to cover the many hours of each day when patients do not have any medical appointments and are therefore 'free' to organize their time themselves. We will consider what other activities are available to the patients, to what extent they take part in them and what effect they might have on the final medical outcome.

6.1 The spa users

6.1.1 Who are they?

The majority of the participants at either of the spas are elderly patients who are there because they are suffering from a similar problem i.e. chronic pain usually resulting from inflammatory illnesses of the joints. There is also a small minority of patients who come to be treated for asthma or blood pressure-related problems. The average age of those taking part was 66.5 years in Misasa, of which 15 were female and 9 male. In Jáchymov the average age was 62.5, of which there were 13 men and 9 women. The lower age of Jáchymov's patients is due to the proportionately higher numbers of those suffering from ankylosing spondilitis, that strikes at lower age than most other similar inflammatory diseases (Jenks *et al.*, 2010). While in Misasa all the participants of the study, and in fact all the patients in the hospital, were Japanese Jáchymov's patient population included those from other countries. German patients were the most numerous but there were also several patients from Scandinavia as well as some Arab countries e.g. Saudi Arabia and Egypt.

For many of the participants these spas were not 'the first port of call' on their journey to health. In their often long search for pain relief, and by the time they have arrived here, they will have tried other, often several, places and other healing methods but seemingly without success. Many participants commented that this is in fact what they

see as their 'last resort' to which they have come full of expectations and hope for a positive outcome. On what basis have patients been admitted to these spas?

6.1.2 Gaining access to the medical facilities of spa

Citizens of both Japan and the Czech Republic whose health would, according to their physicians, benefit from spa therapy, are able to obtain it free from the state-run healthcare system. As was discussed in the previous chapter the cost of a certain number of days, most commonly three weeks, or a combination of a length of stay and a number of treatment procedures is covered by the patient health insurance.

Although the physician's recommendation usually represents the final hurdle on the way to the spa for many people this is not the starting point. It was found that the initial idea to use a particular spa for therapy often came from a member of the patient's family or from a friend. Some of the Japanese patients however themselves spent a considerable amount of time and energy on choosing what they saw as 'the right' spa. They used various independent methods for finding detailed information about spas and their healing credentials in general and Misasa Onsen in particular. Several patients mentioned using the Internet in their search for a suitable place to treat their illness, and others said that at the time when they were actively looking for help they got relevant information from reading books on spas. One lady mentioned attending a lecture on spa medicine during which Misasa Onsen was mentioned in connection with health problems similar to her own. That was why she subsequently asked her doctor to send her there for treatment. Another example was Mrs. A. who first of all did some 'research' on her own. She took trips to several *onsen* that were suggested by her doctor as suitable for her illness, and that helped her to make up her mind to come to Misasa. And even then before deciding that she was happy with her choice of *onsen* she first of all spent several nights in a local hotel. The summary of the

patient data in Appendix A shows the variety of reasons the Japanese patients gave for using the spa.

Misasa Onsen

A question remains “why Misasa Onsen?” when there are so many other spas in Japan to choose from? Why do physicians send their patients here? And why does this apply to patients not just from the surrounding prefectures but from all over Japan? For some patients this represents the easy option as they are here simply because it is their nearest hospital. However, several participants came from as far away as Tokyo (about 400 miles). The primary reason for coming here is existence of the already discussed mineral springs and the special qualities of their water i.e. its high radon content and high temperature. The second, and equally important reason is that only very few of the about 2400 Japanese *onsen* are associated with hospitals, and Misasa is one of the five in existence at the time of this research (Agishi and Yoshinori, 1998).

Although patients seem to be able to exercise quite a lot of independence when choosing a spa they have much less input into the timing of their stay. Patient numbers are controlled by the number of beds and a person can be admitted only when a bed becomes available. Because of the chronic character of the illnesses treated in Misasa the exact timing of a visit is not of crucial importance and even those who are going to return for another period of treatment are not sure of the precise dates. That means that patients rarely meet the same set of people and make long-term friends.

Although there were several returnees taking part in the study only one person mentioned having met one other patient during their previous visit. There was thus no continuity in the patient community.

Jáchymov

How does the Czech medical system deal with the about 450000 people (Czech Bureau of Statistics)³³ that it annually sends to the various spas for therapy? The Czech Republic's approach to the allocation of spas for medical purposes is similar to that in Japan. There is only one way of getting access to spa therapy as a patient and that is by being recommended by a medical practitioner. However, in contrast to Japan where we saw a variety of potential routes for getting this recommendation, here the patients have much less, if indeed any, choice. The reason lies in the centrally organized system of spa medicine. The spa allocation system, based on medical insurance and managed by the medical professionals, is centrally controlled by the government-run health service. General Practitioners are able to prescribe treatment using spa medicine for a large number of complaints but their choice of a spa is very inflexible. Each GP is provided with a list of all the spas in the country together with the details of their indications. Depending on the composition and temperature of the mineral water in each place the various spas are considered as suitable for the treatment of specific medical conditions. No amount of Internet research or suggestions by friends or family can usually affect the outcome. Although the physician will usually try to find a suitable spa close to the patient's home the most important factor is not the location but the recognized effectiveness of the spa in treating the specific disorder. Thus springs of the already mentioned Karlsbad are recommended for the treatment of a variety of digestive tract problems while those with kidney and urinary tract disorders are sent to, among other spas, to Marienbad. Jáchymov is considered very effective for reducing chronic pain in the joints and many patients are sent there despite its remote location at the westernmost tip of the country.

³³ www.czso.cz

Among those who took part in the study there were only two patients who said that they managed to influence the decision on where they were being sent for a cure. In fact both of these had negative rather than positive reasons i.e. their preference was in not wanting to go to a specific spa. The two women, both suffering from painful arthritis, had previously, and quite independently, spent three weeks in a south Bohemian spa of Třeboň³⁴ that uses hot peat rather than hot water baths in the treatment of pain. They asked not to be sent back there because, as both remarked, removing all traces of dark peat from their skin was difficult and they 'felt dirty' for a long time afterwards.

The cost of a basic spa stay in the Czech Republic is completely covered by medical insurance. The definition of 'basic stay' may differ slightly from spa to spa but it generally means three weeks. During that time the patients are accommodated in shared (double) rooms and receive a limited number of spa procedures a day. In Jáchymov this number is three. Variations on this arrangement are available e.g. one can ask for more procedures or be accommodated in a single room, but the cost of these extras has to be met by the patient.

Although the Czech patients have less control over the choice of the most suitable spa than we saw in Japan they are able to exercise much more control over the precise timing of the cure. This is most easily observed in case of patients suffering from ankylosing spondilitis, but it does apply to other chronic illnesses. The chronic character of these illnesses requires repeated, mostly annual, but sometimes even more frequent, visits which open up a possibility of forming and maintaining long-term relationships. Once the physicians decide that a patient needs to be returning at regular intervals the timing of the visits can be agreed on and booked far in advance.

³⁴ <http://www.trebon-info.com/trebon-a-czech-spa-resort>

This is in fact usually at the point of discharge from the spa. This opens up a possibility of arranging to meet the same patients during their next visit perhaps in a year's time. Some of these recurring associations do not last beyond just a few years but there were patients whose relationships have lasted up to 25 years. The dynamics and importance of this situation and its effect on the patients' experience of the spa will be discussed below. However, these are special relationships which are usually spatially and temporally limited to the spa. Most of those interviewed indeed said they never see or contact each other outside the spa environment. Several of the participants nonetheless mentioned maintaining rather irregular telephone or, more recently, email contacts between visits. These time and space delimited friendships are often extended to embrace entire groups of people who renew the 'membership' of the group on an annual basis. This social aspect of the spa was remarked on by many of the participants as greatly contributing to the positive outcome of the therapy.

6.1.3 Users co-operation with the therapy

Many of the patients arrive having unsuccessfully tried several other methods or other places. Because the pain they experience continues to have a negative effect on the quality of their lives they come to the spas being highly motivated to do whatever is regarded as necessary to help them get better. They are willing to co-operate with the medical professionals and with the various treatments that make up the therapy as well as with the regime imposed on them by the management. This positive attitude towards co-operation also extends to tolerance of both the harsh climate and the relative remoteness of the two locations.

Misasa

The constraints the two hospitals impose on their patients' freedom of movement have recently become quite severe, the most noticeable one being the 7 pm curfew. None of the participants, however, openly complained about the lack of either freedom or

shortage of things to do. Although the hospital is located in an *onsen* i.e. a place normally associated with pleasure on this occasion what is sought is pain relief rather than relaxation. If users of the springs wanted to achieve their goal i.e. improve their health they had to accept some of the limitations of their freedom to be a necessary part of the medical environment. They actually used the verb *hataraku* (to work) when describing how they spent their days and how they dealt with the various tasks set for them by their physicians. Several patients talked about the hospitals as places where they came to do “work” (*shigoto*).

“We have to work hard at getting better” commented several of the participants. This desire to achieve their goal of improved health manifested itself in the manner in which patients performed their prescribed tasks. Thus most people ‘worked hard’ at their pool exercises and kept a careful account of the distances they travelled while doing their walking exercises. These actions were often accompanied by the words “*Gambatte kudasai!*” (“Do well, persevere!”) that were said to encourage each other in their pursuit of improved health. The rest periods were also taken seriously and usually performed in the ‘proper’ manner of lying on one’s bed and not reading or watching TV. One patient brought up a further reason for needing to ‘work hard’ at getting better. She lives with her daughter and her family and staying in a hospital which was long way from her home made her acutely aware of how important her family is to her. She decided to ‘work’ really hard at getting better to speed up her healing process so that she may be allowed to go home sooner.

Jáchymov

The generally relaxed environment of the spa is reflected in the combination of Jáchymov’s accommodation style and the categorization of its users as ‘guests’. The three spa houses are a mixture of a hospital and a hotel, where those using the spa are being treated respectively as patients in a medical environment and as guests in a

wellness spa. They have much more freedom of movement, less supervision of their free time and more access to entertainment and social life outside the physical boundaries of the spa houses than have the patients in Misasa's hospitals. Despite this relaxed attitude of the medical staff the patients are serious about the need to co-operate with the system and willingly meet the many demands imposed on them by the physicians and by the treatment procedures timetable. An example of the level of co-operation would be the general attitude to the early start of each day. Some of the procedures start as early as 6.30 in the morning, i.e. before breakfast, and yet not one of the participants complained about having to get up for these early sessions. They accepted that this arrangement is necessary and are therefore prepared to co-operate fully. Another slight inconvenience results from the accommodation being scattered around the spa. Those living in the various pensions have to spend parts of each day by walking between the pension where they stay and the associated spa house where they are treated. Instead of being able to rest in their rooms during the brief breaks between treatments they usually spend this time in the hotel lounges. Some of the elderly patients found this tiring. However, although this was not a perfect situation, it was again perceived as a necessary part of the way the cure was organized. In fact, any of these observations concerning the treatment were simply an acknowledgement rather than a criticism of the situation, and were always accompanied by expressions of full co-operation with the situation.

6.1.4 The patient community

The majority of users of either spa reach the location only after a long journey along narrow mountainous roads passing through sparsely inhabited countryside. The closeness of the mountains on three sides gives both places an atmosphere of separateness and isolation similar to that of the Berghof TB sanatorium portrayed by Thomas Mann in his novel 'The Magic Mountain' (Mann, 1927). And like Mann's hero,

Hans Castorp, our spa patients also constructed their lives within the confines of their spa locations, rarely venturing out of the area into the nearby towns. Hans Castorp, on entering the sanatorium for treatment, immerses himself exclusively in the inner life of the place. To him it feels detached from the rest of the world which he considers to be the 'world below', which holds no interest for him and in which he wishes to play no part. Although the sanatorium lies within very easy reach of the 'world below' it is a separate living space. For those living temporarily within this setting, i.e. the community of TB patients, it assumes the qualities of Turner's liminoid space, space that has developed outside the on-going central economic and political processes and that has allowed those within it to behave according to very different rules of conduct (Turner, 1977).

The spa patients in this study, to a greater or lesser extent, also join the distinct communities of the spas. What binds these communities together are not economic or intellectual ideas, instead it is the location and the belief systems associated with the patients' medical needs together with the spa's ability to meet them. For the duration of their cure until the point of their departure the Balneotherapy users make a transition from their lives within a customary social group into a life within this separate community with its well defined goals and with its new rules. Not all of the patients necessarily wish to make this transition and, as will be discussed later, some prefer not to participate in the life of the spa community.

This study found that not only are there differences in the degree of social cohesion within each spa but there are also marked differences between the two spas with Jáchymov patients showing a much greater degree of social cohesion than Misasa patients. Nevertheless, whether patients wish to actively participate in the life of these

separate communities or not, they become incorporated into them on arrival and break this connection at the point of their departure.

6.2 Three stages of spa therapy

It is possible to think about the spa users' progress through the therapy as consisting of three discreet stages which would correspond with the phases of van Gennep's rites of passage theory and its ceremonial patterns that accompany the transition from one stage to another (van Gennep, 1960). Elements of van Gennep's rites of passage can be found in every change of state or place or social structure. They have a basic tri-partite structure that consists of a separation phase, margin (or limen) phase and a re-integration phase. Those undergoing Balneotherapy in one of the two spas pass from the initial, or separation, stage of being an ill person to the limen phase marked by becoming a patient treated in one of the medical institutions where this research is based. The liminal phase includes all the therapeutic elements of the cure that combine direct input of both the medical staff and the patients. It is hoped that the combination of these ingredients will result in a healthy and well patients who are ready to pass back into their original society. This stage finishes when the patients are ready to be discharged and re-enter the original society. At the point of re-integration into a new state however they are either well and healthy or at least much less ill than when they started the passage. They have undergone a transition into a new stage. The transitions from one of these well-defined stages to the next are accompanied by special acts, or rituals, described below. Some rituals are more elaborate than others. The ritual passage that marks the transition from a category of an ill person to the category of a patient is marked by the hospital admission procedure performed on the first full day of the cure. This procedure consists of a routine taking of the patient's details and allocating them a bed or a room, followed by the initial medical examination. The thorough medical examination is carried out by physicians in both spas despite the fact that each patient arrives with a full medical record provided by

their own doctor. The local balneotherapists still do their own detailed examination and tests, and it is on the basis of these that they decide which of the spa therapy elements will be applied to each patient and produce a summary of the exact type and number of the procedures each patient will need to receive. It is this summary, this plan of medical interventions that will be applied during the therapy, which marks the patient's passage into the most significant of the three stages i.e. the spa therapy consumption period.

The end of the liminal phase and the beginning of the third phase is marked by the second ritual, i.e. the final medical examination. It indicates the point of re-integration of the, by now, healthy person into their original society. This final stage actually starts with the discharge from the hospital or spa house.

There are significant differences between the two field locations in the patient experiences during the liminal phase but the first and the last phases of these particular rites of passage are very similar.

6.2.1 The separation phase

Patients in both spas usually arrive in the afternoon of the day before their treatment starts. This allows them to be admitted and made comfortable in the hospital or the spa house and also enables them to be ready to start their therapy early next morning. The admission procedure of registration, allocating a bed or a room and explaining where the many parts of the spa are found and how the system operates, marks the users' separation from the norms and values of their normal life and the entry into the spa patient community. This part of the separation ritual in Jáchymov is a little more complex because of the double identity of the new arrivals. They need to be treated simultaneously as hotel guests and as spa patients. Admissions here always happen on Sunday afternoon when all new arrivals are first of all booked as guests into their hotel-

type accommodation. The new arrivals are informed prior to coming whether they have been allocated single or double rooms in either the spa house itself or in one of the several pensions. Only after their medical examination early on Monday morning do they enter their lives of spa patients.

Patients in both spas are not expected to put on hospital gowns but can keep their own identity as a 'social persona' (Ohnuki-Tierney, 1998) and wear their own clothes. In Misasa these seemed to be almost entirely casual and comfortable ones while in Jáchymov, where patients come expecting to take part in a range of social activities, some of which are rather formal, they generally arrive with two types of clothing. These are either similar to those worn in Misasa i.e. casual and comfortable, or they are more formal outfits that are intended for use during the evening social activities.

6.2.2 The liminal period

The limen (or threshold) is usually a protracted passage between states (Turner, 1977). It was found that this was the stage when the way Balneotherapy is administered in the two spas, and hence the patient experience, diverged.

The management of each spa control the daily activities of their users partly by institutional means and partly by allowing, or enabling, each patient to have certain amount of personal input into the system. There are many ways that days spent in the spa can be organized but whatever the system it has to meet certain criteria i.e. it has to enable all patients to receive all the recommended treatments and leave enough time or opportunity for the additional elements of the cure i.e. exercise and rest. In both spas the system runs on a mixture of managerial control and patient cooperation which I have called the 'formal' and the 'personal' structures. The first, the institutional, structure exercises direct control over the lives of the patients from

making sure that all those in their care receive the medical care they have come for, that they are comfortable, they are fed and they are safe. Activities that fall outside this direct sphere of institutional influence I have called the 'personal' structure. This is an area over which the spa users are able to exercise certain amount of personal freedom. Although they are responsible for punctually attending the various sessions and performing the exercises suggested by their balneotherapists, they are also able to decide how to organize their time that is not taken up by these activities. It is the ratio of these two structures to each other that differs significantly between the two spas and, in turn, leads to many other differences which affect the patient experience. This difference is two faceted. The first is related to the ratio of institutional to personal control and the second to the area of control. So while on the surface it seems that because Misasa patients are able to self-organize the timings of their treatments they have more personal freedom within the system, closer investigation showed that this only concerned the organization of the 'working' part of their days. This is the part that is made up from activities the patients called '*shigoto*' or work. Looking at the evening activities and the procedure-free time however reveals that here the patients are much less free or in fact strictly controlled as we will see in section 6.3. On the other hand while Jáchymov's patients have less, if any, say in how to organize their treatment procedures they have a much greater amount of freedom in choosing how to spend their afternoons and evenings free time. Their days will be described in detail in section 6.4. First we will try to establish how these differences arise.

Misasa Onsen

By the end of the initial medical consultation each patient is allocated a physician who is responsible for their overall state of health which he will monitor daily. This physician will also report on the patient progress to the Hospital Director (who is the Chief

Physician here) during the weekly rounds of the wards. The patient-doctor relationship is one of complete and unquestioning trust; at least that is how all patients refer to their physicians when interviewed. This trust extends to the Director who has a wonderfully caring and sympathetic bedside manner that seems to put each person at ease and makes them feel important and cared for.

Although the lists of treatments each patient is prescribed differ between patients they all include one essential element which is the daily round of exercises performed in the hospital pools. This is supplemented by several other procedures all of which were described in the previous chapter. Patients are given a list of the procedures they need to take without their being given an exact time when to take them. They themselves are expected to take responsibility for structuring their days and organizing themselves around these prescribed procedures. The 'formal' or organized structure of a patient's day covers only set meal times and the few procedures that cannot be taken without an appointment. These are the physiotherapy sessions (or 'rehabilitation' as it is called in Misasa), the localized hot mud application, and the natural sauna which, for reasons of transport and limited availability, can only be taken on two afternoons a week at a specified time. All other procedures can be taken at any time that suits each patient, and they therefore fall within what I called the 'personal' structure i.e. the parts of the cure that are organized by the patients themselves. This is also where patients are free to fit all the other activities, take exercise and also have sufficient rest. One of the activities frequently performed during this time are visits to the '*o-furo*' to enjoy taking a proper *onsen* bath.

The 'formal structure' is applied again in the evenings when the hospital management once more takes control over the patient lives. The main hospital doors are locked at 7

pm restricting all outside movement and cutting off the possibility of participating in any social life outside the hospital complex.

Jáchymov

The point of entry into Jáchymov spa system is the same as in Misasa. There is a medical examination during which, despite medical notes arriving with each patient, an independent evaluation of the patient's medical condition is made. Following this examination the physicians decide on the appropriate spa regime for each patient i.e. both the types and the numbers of procedures they will be given during the three weeks of their stay here. Using a centrally controlled computerized system of appointments the Admissions Counter staff then produce a detailed timetable of all the procedures for the entire period. There is no space for the patients' own initiative as to when to attend the various procedures and how to organize certain parts of each day. The receipt of this timetable marks the transition point from the ordinary life of a chronically ill person into the liminal period where treatment and healing will take place.

Jáchymov's days are divided into two discrete parts that more or less coincide with the 'formal' and 'personal' structures. All medical procedures, except for a few very specialized treatments, are carried out in the mornings. Because of the sheer numbers of people involved, timetabling is not only very tight but it has to be rigidly applied and followed. Parts of Jáchymov patients' lives therefore feel tightly controlled by the management. These are the institutionally managed elements of spa life e.g. an early start to each day followed by mornings which are a steady progress from one procedure to the next. Many guests jokingly commented that they feel like being back at school and having lessons. However, by lunchtime when all the treatment procedures are finished, the regimented management control drops off sharply. There are long free afternoons and evenings when patients move into their 'personal'

structure. Although they are expected to take a certain amount of exercise and rest they are free to go out and take part in the varied social life of the spa.

6.2.3 The reincorporation

The end of the liminal period is in both spas marked in a similar way. At the conclusion of their stay all spa users undertake a final medical check-up, at the end of which they are given their final medical record which they take to their GPs. They exit the temporary society and its rules and re-enter their original cultural realm. This time they are in a different, i.e. healthy, state from the one they left. There is usually a very brief and rather low-key leaving ritual when patients usually just thank their physicians and say good bye to their friends before leaving the spa.

6.3 A day in the life of an Misasa *onsen* patient

Misasa's patients are a partly self-selected group of chronically ill people whose lives in the *onsen* hospitals move within two very differently organized spheres i.e. the official or 'formal' and the 'personal' one. The 'partly self-selected' label is used because not all are here on a direct recommendation by a physician. Prior to asking their doctor to be sent here many have used a significant amount of independence and resourcefulness in finding out about the local therapy. The period of Balneotherapy in the Misasa hospitals is not set the way it is in Jáchymov but is of variable lengths. Each person's condition is considered individually and each patient stays as long as the physicians judge necessary.

Whatever their length of stay, once a patient is admitted he or she needs to conform to the 'formal' structure imposed by the hospital but they also have a considerable amount of personal freedom in self-organization of their days. They decide when to

take most of their healing procedures and take responsibility for doing their exercises. They also need to ensure that they get the expected amount of rest.

6.3.1 The formal structure

The formal section of the stay is organized around two sets of events - the procedures each patient has been prescribed, and the set mealtimes. Outside these the patients have a large amount of personal freedom but also responsibility for fulfilling their role of a patient.

The main therapeutic procedure, the total body immersion in the natural thermo-mineral water takes part in the hospital pools which are available all day. It represents a part of the therapy where the 'formal' and the 'personal' elements mix. Although the use of the pool is compulsory i.e. part of the 'formal' structure the timing is left to the users. However, this is when the prescribed exercises are expected to be performed which allows for a certain amount of 'personal' input. The participants' attitude to this task varied greatly from very diligent to doing hardly any. Several of the men were quite open about their not doing their exercises very well but, without exception, all the women were enthusiastic about the importance of carrying out the exercises as well as possible. This was the 'work' they needed to, and wanted to, do in order to get well.

Mealtimes

The dining room is a bare and functional room dominated by a large television which is usually switched on. Despite what some private patients said about not wanting to eat their meals in the isolation of their rooms, unless the dining room was full, most patients choose to sit on their own. The men especially tried not to share a table while only a few of the women, by no means all, chose to sit together. The setting does not encourage conversation or socializing as most patients sit facing, and watching, the

television set. People usually finish eating quickly and, having cleared away their trays, leave. The social interaction during mealtimes appeared to be minimal. This may be due to patients not wanting to integrate into this temporary society of patients, and therefore not wanting to show solidarity with or to contribute to the lives of the other patients. When asked, most participants indeed said that they indeed do not feel to be part of any such group made up by the cohort of hospital patients the further manifestation of which can be found in other behavioural patterns observed in the spa e.g. the solitary way patients take their walks that will be described below. It may also reflect one of the ideas that most Japanese learn during childhood training and that prepares them for the social world which they will face as adults. In her study of pre-school children Hendry describes how a well-brought up child is expected to behave at mealtimes. She says that during a meal 'while silence is not enforced' children are nevertheless expected to finish eating as quickly as possible (Hendry, 1986).

6.3.2 The personal structure

Although the patients' lives are to a great extent controlled by the management set of practices they are able to control some aspects of their spa lives. They can manage their free time.

Patients' free time

Free time in Misasa does not revolve around a large continuous amount of time as it does in Jáchymov where it comprises whole afternoons and evenings. Here it surfaces at intervals throughout the whole day that are slotted between the many periods of treatment-related activities. As there are so few possibilities for some type of interesting social life the hospital days can, and comments made by many patients show that they indeed do, seem very long. Patients therefore need to develop strategies that help them minimize boredom. They usually do this breaking the day up

into smaller and much more psychologically manageable units (Roth, 1963) and fill these with one of the few activities available to them.

The pool and the *o-furo* are both the most popular and the most time-consuming activities. Patients can use the pool any time it suits them, and during the day between five to ten people can usually be found in the pool walking around while doing the set exercises. Although there is very little conversation, this activity involves a degree of social contact that most patients singled out as one of the features they liked about it. For safety reasons the pool closes at 6pm but the very popular *o-furo* remain open until late. They are used by all patients, by some often more than once a day. Having spent two nights as an in-patient in the Okayama University hospital I was able to witness the frequency with which some of the patients went to take a bath in the *o-furo*. They explained that one of the reasons for doing this was indeed that it was using up a lot of free time, and the other reason was that they saw the *onsen* water as being special and that bathing in it will lead to improvement of their health. Several of the women also mentioned how good their skin felt after an *o-furo* bath, something I have also experienced myself. Finally, those who perceived the spa therapy as “work” took several baths a day because they wanted to “work hard” at getting better. One of the women with whom I shared a hospital room used the *o-furo* three times each day. She suffered from a mixture of chronic disorders and believed that doing this “hard work” of bathing will help her recovery.

The rest of the free time that patients have during the day is usually spent resting or doing light exercise. Rest is typically taken by lying on the bed which often means that people fall sleep. Light exercise seems to have two forms here. The more important of the two are the exercises taken as part of the pool sessions but all patients are also expected to do other exercises, most commonly to walk. Those whose physical condition does not allow their leaving the hospital complex take their exercise by

walking along the long hospital corridors or on the roof terrace. The rest of the patients, weather permitting, enjoy walking outside. As they are free to take their walks at any time of the day they are able to avoid the worst of the local weather which can sometimes be very horrible indeed. The density of the vegetation covering the surrounding mountains and the lack of any well maintained access paths makes it impossible to walk in the hills. This affords limited walking opportunities but taking walks was found to be popular also for several reasons. One of these, mentioned by almost all the patients, is the lack of traffic and the clean unpolluted air. The volume of traffic, although always low, decreased even further after a new by-pass tunnel was built about eight years ago. It takes most of the through traffic away from the village. The quality of the air is especially appreciated by several of the asthma sufferers, all city dwellers, who were among the participants. The main reason given for the popularity of local walks is the character of the village itself. With its little lanes, the traditional village houses with their beautifully kept gardens full of Japanese acers and azaleas, the river, the paddy fields and the native vegetation it represents for many the *furusato* (the idealized native place) which they enjoy exploring on their walks. Most of these eventually end up in the older touristy part of the village with its small souvenir shops, cafes and tea shops that some of the patients like to visit.

Almost without exception people walk on their own. One of the women explained that, in her view, this happened because of the general frame within which the Japanese do any sort of travelling. Travel is usually associated with time spent within a circle of their family or their close friends, and it is not usual to go on trips with people with whom one is not well acquainted. It seems that the Misasa patients feel that the temporary character of the hospital situation is one where because they are associating with an out-group of people they do not need to co-operate with them or establish and maintain long-term harmonious relationships.

I have so far concentrated on free-time activities that are of relatively short duration and therefore easy to organize. There are however two periods of free time of significant lengths that require the patients to develop more sophisticated strategies for managing them. These are the evenings and the weekends. Many patients found the weekends to be especially difficult to deal with. There is no access to the pool which is being maintained i.e. emptied, washed and re-filled with fresh spring water ready for the next week, and there are no set treatment procedures.

Evenings

The main evening activity people engage in, especially is watching television. Each patient is provided with their own small TV set, apart from which there is a large set in the dining room and another one in the downstairs waiting area. No other passive entertainment is available. Going to bathe in the *o-furo* is one popular way of filling the evening hours before bedtime and, judging by the number of pairs of shoes lined up in front of the *o-furo*, this is where many patients spend a part of their evening. Many patients read both books, mainly *Manga*, but also newspapers. Occasionally some of the women get together and make things with their hands e.g. *origami*, embroidery or quilting but these activities are very much dependent on the patient cohort. Only when one of the female patients has a certain skill she is happy to share with the others do a few of the women meet and spend evenings in the dining room learning or practicing their new skills and chatting.

There were two exceptions to this general picture. Two retired men, both in their seventies and both paying a supplement for a private room, organized their evenings very differently. The first, a retired Tokyo journalist, was using this period to edit several articles that he was about to send for publication, and to prepare a lecture he was due to give shortly after leaving the hospital. As he wanted to give it in English he

asked for my help and we spent several evenings working together in his room. He said that he “worked hard” at getting well during the day and the evenings were therefore his to use as he wished. The one hurdle we had to cross on each of my visits was my getting into his room without being noticed by the nurses. One part of their job was to protect patients’ rest and to make sure that it is not disturbed. The presence of any outsider, mine included, was seen as disruptive. I therefore had to devise a very complicated way of going upstairs without being seen. The second patient who found an interesting way of spending his evenings was an energetic retired manager of an engineering firm who, after making doubly certain that nobody else could hear, admitted to using his evenings for gambling on the Internet. Knowing that the Management no longer pays for Internet access and that the Internet is frowned upon as intrusive and considered bad for ill people I wondered how he manages to engage in Internet gambling. With a conspiratorial smile and saying “But don’t tell the nurses” he extracted a laptop computer hidden in the depth of his bedside cabinet. He used a USB key which enabled him to have fast access to the Internet and therefore able not only to maintain email contact with his family and friends but also to gamble. As we will see later this was not the only time the phrase: “Don’t tell the nurses” was mentioned by one of the patients.

Weekends

During weekends there are no medical procedures and the pool is closed. Most people rest or take walks locally but those who can try to get outside the village. Very few patients have their own car here and the majority therefore have to rely on the very infrequent, and rather expensive, public transport. This severely limits the choices of what they are able to do. There are only two ways to go from Misasa i.e. either up the narrow valley into the mountains perhaps to visit the ancient Buddhist temple of Mitokusan, or down river to the town of Kurayoshi. The latter is the direction most

people take, especially if they want to do some sightseeing, shopping or to go further afield. Those who have their own transport are able to go further and explore the beautiful surrounding countryside. However, there is an official limit to how far any patient is allowed to travel at weekends. Prior to taking a trip of any length patients need to ask the nurses for permission to do so. The provincial capital of Tottori (about 20 miles away) is about the limit patients are allowed to travel. This officially allowed distance is however not adhered to by all.

“I went to Daisen at the weekend” (a large volcano about 40 miles from Misasa) confided one of the men. I wondered how he managed to go on such a long trip. “I knew I would not be allowed to go that far and so I asked for permission just to go to Kurayoshi”. “But please, do not tell the nurses” was the, by now, familiar phrase he added.

Next time I heard it was in connection with food. A well-balanced and healthy diet is an important part of the therapy, and both hospitals employ dieticians who carefully plan meals to suit each individual patient’s needs. One of the men, while describing his weekend outings, admitted that because he loves *soba* (buckwheat) noodles, and because they are never on the hospital menu, he uses the weekends to visit some of the many *soba* noodles restaurants in the area.

“But don’t tell the nurses” he pleaded.

These two men are using the period of spa therapy with its spatial and temporal separation from their ordinary life as an interlude allowing them to engage in different from normal activities that might include an element of risk, tension and uncertainty i.e. some of the characteristics of ‘play’ (Bateson, 1983; Huizinga, 1949). At the same time, and because they need to fulfil their social role of patients they engage in these activities in secret. They treated me as if I were a member of their selected in-group. I

was let into their secret but due to the feelings of inclusion there was no confrontation in the situation and maintenance of group harmony.

While most of the patients were following the rules laid out by the hospital management the example of the two patients who 'played' in secret shows that there were clearly some who did not. My suspicion is that there were more than just these two men who did not follow the hospital rules as diligently as they told me during the interviews. The reason for my being told or not about their real free-time activities seemed to reflect their attitude towards me. If I was seen as someone in authority, or as someone connected to the management, they would show me their *tatemae* (or outside) face and give me a certain type of information. If, on the other hand, they were able to see me as a member of the patient 'in-group' this would give them the opportunity to behave differently and give me access to their *ura* (inner) feelings. I would have been given a different, more intimate, type of information about their activities. Recognizing all these dichotomies and being able to behave appropriately in every situation i.e. being able to fulfil certain expected adult role is a skill acquired gradually during socialization (Hendry, 1986) . However, as Hendry points out, these dichotomies are by no means clear cut and experience is needed in order to choose the appropriate face or display the correct behaviour.

Amongst the important patterns learnt during socialization two are directly related to maintaining and improving health. The first is the general attitude towards health and disease and the second is achievement-oriented behaviour, both learnt during socialization. Within the traditional unit or family where the mother's responsibility is to instil correct values children are gradually trained to take an active responsibility regarding their health, to be aware of their body processes and of minor deviations from the norm. In the East Asian medical system that reached Japan via Korea in the 6th

Century AD, where both the social and the psychological factors are universally acknowledged in the origins of most diseases, the two factors are dealt with by different sections of society. The doctor is responsible for looking after the physiological aspect of the disease while the patient, and his or her family, deal with the psychosocial components (Lock, 1978). Socialization also prepares the child to be able to fulfil the expected adult social roles which includes having to learn behaviour that motivates people to attain goals or to achieve (de Vos, 1973; Rosen, 1959). In trying to improve health one needs to behave in such a way as to achieve or accomplish this aim.

6.3.3. Factors contributing to healing

In an attempt to remove pain and improve the state of health Balneotherapy combines medical procedures with the embodied experience of illness. Its practice is influenced by a variety of cultural factors many of which emerged from the patients' narratives. These are outlined below.

Likes and Dislikes

Without exception all those interviewed found Balneotherapy to be beneficial for their health. They all liked and trusted the physicians and they all believed in the combined power of the water and the medical procedures to make them feel better. Some medical procedures were more popular than others, but there was very little that was positively disliked. The only procedure mentioned by a small number of patients was the sauna because they felt it was too hot. This seems to have been an exception as for many people the sauna came as close second in popularity to the hospital pools which were unanimously voted to be the most popular part of the therapy.

When asked about what in their opinion was the most important contributory factor to the success of the therapy as measured by the increase in the feelings of well-being

most patients mentioned lack of stress. Several reasons were given for this. The absence of work or of family responsibilities and/or household chores was the most significant element but the beauty of the hospital surroundings was also seen as important. The constant sound of water, the colours of the fields and forests and the views of the paddy fields and mountains may not just be pleasing to the eye but, according to the patients, may also assist in the healing process.

Apart from enjoying the feeling of well-being due to lower stress levels there were other likes and dislikes. Of the first the most appreciated one was the hospital food. Its quality and variety was enjoyed by most of those interviewed and discussed at great length as a contributing factor in the improvement of health. One male patient also compared the stay in the hospital to an activity that he enjoys and in which he still takes part annually at home i.e. *tōji* (self-prescribed *onsen*-based healing) (see section 3.2.2). He however thought that although he does feel better after *tōji* a stay in one of the Misasa hospitals would have a much greater effect on his health because it includes medical supervision.

Contact with other patients especially those suffering from the same illness was the next factor mentioned by several patients as helpful. Most participants really liked the fact that while at home they were reticent to discuss their health problems, here they are able to talk freely about them. They spoke about the relief that accompanies their being able to do this.

“Just seeing other people being unwell and coping with the adversity helps” was a comment made by several patients.

Patients did not just exchange information about the various treatments and how they affected them personally but they often gave each other encouragement. The sharing

of medical-type of information was yet another aspect that seemed to be of great value to patients. Many, especially those who have been here before, believed that the hospital was not providing a sufficient amount of information about the therapy to the patients. One example of this was the relatively recent Management silence about the presence of radon gas in the mineral water. Most of the participants admitted that they only became aware of the presence of radon after talking to other patients. Although I tried to raise this subject with several members of the hospital staff it was never properly explained even to me. The closest I came to an explanation was from one of the younger physicians who was not a specialist balneotherapists. He was very sceptical about the hormesis theory subscribed to by the some of the other physicians, and suggested that the mention of radon on the hospital publicity material has been withdrawn precisely because of the current disagreement about its action at the top level of Management. As Lock suggests the 'medical profession is not a uniform and hegemonic institution' (Lock, 1987) and differences in opinion therefore exist and have to be accommodated in its running. Medicine often needs to justify therapy in terms of some rationale or the theory of the therapy which in practice must mean that differences of opinion exist (Obeyesekere, 1992).

Expectations

Patient expectations of positive results were high reflecting the Japanese patients' beliefs in the positive power of water founded on a combination of cultural, religious and social elements. *Onsen* are associated with pleasure and feeling of well-being, and visiting *onsen* is one of Japanese people's favourite pastimes. This was commented on by many of the patients who reminisced on the many occasions when they visited *onsen* with either family or friends, and of the feeling of well-being it has given them. Combining these feelings towards *onsen* water in general with a stay in an *onsen* hospital which is staffed by expert balneotherapists was likely to invoke positive

associations before the therapy even started. This was certainly true for the participants of this study. They agreed that even before coming they had high expectations of the therapy's beneficial influence on their health. For some of the patients there was also something special about the feeling of the spring water on the skin that produced physical sensations of well-being.

Two female patients who regularly used the hospital *o-furo*, sometimes more than twice a day, also talked of the Misasa water as taking care of their *inochi* or their life or spirit. They believed that the *onsen* water does not just remove impurities represented but their illness but is also capable of '*inochi-no-sentaku*', (washing their spirit), that is of recovering the power that keeps us alive (Morioka, 1991). This view was however not shared by any other patients.

6.3.4 The outcome

The effect of balneotherapeutic treatment is not judged by results of specific tests or measurements of changes in various body substances or functions. There are no objective parameters that would allow one to measure the degree of success or otherwise of Misasa's Balneotherapy. The results can be judged mainly by the subjective reports given by the patients based on the comparison of the patients' feelings at the onset of the therapy with how they feel when leaving.

The patients form a diverse collection of people suffering medical problems that, although related, are not identical. Most of them arrive in Misasa experiencing pain that accompanies chronic inflammatory disorders in the joints. There is a small minority of patients who use Balneotherapy to aid their recovery following a major operation, and there were two patients with major mobility problems who saw Misasa as their last chance at overcoming their medical condition. They had previously been treated by different hospitals and by other methods, all of which had so far been

unsuccessful. Both have been independently told that their condition is untreatable and that they will never walk properly and will have to spend the rest of their lives in wheelchairs. All of these problems are painful, and the usual treatment is daily intake of painkillers. Given this range of problems what possible way is there for judging the outcome?

In the absence of objective measures all we have to rely on are patients' reports which show that they left the *onsen* hospital satisfied with the results of their stay. The two wheelchair-bound patients were walking, and the rest of the participants were either completely without pain, and therefore no longer taking painkillers, or were using much reduced quantities of drugs. Many have lost weight, many left with improved mobility, and all felt happier and more positive about life.

Although the reported outcome is positive it does not mean that most of these people have been cured. Both the loss of pain and the drop in the intake of painkillers are usually temporary, and for most patients last between four and six months (See Appendix A). Due to the chronic character of the problems treated by Balneotherapy in Misasa most patients will therefore need to return regularly for repeat treatment.

6.4 Work and play – a day in the life of a Spa guest in Jáchymov

Chapter 5 dealt with both the similarities and the differences between the medical establishments in both fieldwork locations. In Misasa the use of water in the pool as the main treatment method allows for great time flexibility and small staff numbers. In Jáchymov where the main treatment element for all patients is based on taking a daily bath this calls for a large number of supporting staff and much less flexible time management of the resource. As a consequence patient days in Jáchymov need to be meticulously structured. They are divided into two parts which roughly coincide with

the two categories that I have assigned to the activities taking place in the spas i.e. the 'formal', or medical and management category, and the 'personal' or social category. The first group of activities occupies each morning when all the strictly medical procedures take place, and the second takes up afternoons and evenings. But while users have very little choice within the former structure they have a significant amount of freedom within the latter.

6.4.1 The formal structure

Forenoons

Both the number of different procedures on offer and the sheer numbers of patients call for accurate planning of the mornings. Detailed computer-generated timetables covering the whole of the three weeks-long therapy are printed and given to each guest on the first day leaving no space for decisions to be made by the individual users. Jáchymov's patients seem to understand that this is the way their lives are going to be controlled for the period of their stay, and seem to be willing to co-operate with the arrangements. I found that the timetables completely dominated the patients' mornings. Everyone carried the document with them and frequently consulted it. Patients clearly worry about either missing an appointment or being late. Those for whom this is the first visit find this school-type timekeeping on the whole not just worrying but even slightly annoying. 'It feels like being back at school' is a common comment. The attitude of the 'old hands', i.e. those who are here for a repeat visit, is much more relaxed and casual but even they kept referring to their timetable and making sure they would not be late.

There is one more timetabling issue that was occasionally mentioned by patients. As the spa management tries to accommodate all the procedures for all the patients in

the first half of the day, everything has to start as early as 6.30 am. But I found only one participant who really did not like this arrangement. She complained about how stressful the need for good timekeeping and early starts was.

'I sleep badly here worrying that I shall sleep in and miss the first appointment' was how she expressed her feelings.

Yet again, we can detect echoes of Thomas Mann's 'Magic Mountain' novel here (Mann, 1927). All the occupants of his TB sanatorium are also obsessed with schedules, their days broken into a multitude of precisely timed activities in a world which is part of "the concept of a small artificial universe devoted to sickness " (Humphreys, 1989). The breaks between appointments are used by most of the patients for socializing. Almost all can be found in the spa house lounges resting, reading or meeting other patients and having a coffee or a drink. The morning activity is over by noon when lunch is served.

Meal arrangements

Meals are taken in formal dining rooms and although the different spa houses offer different levels of luxury, all the tables are set with white table cloths and napkins and fresh flowers are usually placed on the tables. There is no television in the dining rooms, and there is proper waitressing service. All tables are set for four and, because the houses are usually full to capacity, nobody is able to sit on their own. Mealtimes are therefore yet more occasions for social contact, of getting to know one another and places where individual health problems can be, and definitely are, discussed.

Afternoons

Except for some very exceptional cases the afternoons are essentially procedure-free. In contrast to the mornings when patients have no choice in what they do and when, the afternoons are all about choice. Patients are expected to cover the two remaining components of Balneotherapy i.e. rest and exercise but they can be done at their own

discretion. These periods are entirely devoid of any imposed structure. It is up to the patients to choose what form of exercise they will take and how much, and also how much rest they allow themselves. The only exceptions are the ankylosing spondylitis sufferers who spend most of their afternoons doing the vast amounts of specific exercises they are prescribed. But even they are able to do this in their own time.

6.4.2 The personal structure

The freedom patients experience while taking the cure in the spa is of two types. First of all they are enjoying freedom 'from' something i.e. freedom that has its origins in their separation from the outside world with its problems and stresses that have been left behind. The all-pervasive Internet that enables non-stop connection with the outside world is barely used here. Although all the spa hotels do offer wireless Internet access they do not provide computers and consequently, as very few of the guests had computers of their own, this is currently a much underused activity. So while some people did keep in touch with their families by phone, it was very much on an occasional rather than regular basis. The second type of freedom or the 'freedom to' could be detected in the behaviour patients displayed during the afternoons and evenings. As they found themselves living in a space that was separated and also different from their ordinary life, and within a temporary world that ran according to different rules they gave them the freedom to join in activities not open to them in their usual environment.

How do people behave in these situations? How do they spend their free or 'playtime' afternoons and evenings? Are they conscious of this situation? And if so do they show behaviour that is different from usual? Some do and some do not. Some actively seek social engagements within this liminoid space while others, admittedly a tiny minority, shy away from the possibilities it offers. One female patient in fact complained to me

about what she felt was almost an obligation put on her by the group of patients who were staying in the spa at the same time. They put pressure on her to take part in their social life and because she did not want to they made her feel uncomfortable. She dealt with this stressful situation by requesting her next visit to take place at a different time of year. This meant that she would be staying in the spa with a different cohort and would be released from the social pressure generated by the current group.

Afternoons

Many patients simply spend their afternoons going for a short stroll, taking a rest, or reading or visiting one of the several cafes or bars dotted around the spa. Some of these venues are luxurious and provide pleasant, and surprisingly inexpensive, environment for either reading or for having a drink and a chat. This is a culture where having a beer, or several, or a glass of wine early on in the day is socially accepted and even encouraged.

The more adventurous, or indeed fitter, guests use their free afternoons to get away from their immediate surroundings. Many of the patients try to take advantage of the various bus tours organized by the hotels. There are a number of places of both cultural and historical interest within easy reach of Jáchymov, and a visit to one of these can easily be accomplished in a single afternoon. These excursions are very popular and to guarantee a place one has to book well in advance. Others choose to follow one of the many well-kept paths in and around the spa that lead to the few places of local interest i.e. the wonderful local museum or one of the many interesting old churches, the oldest of which has a triptych attributed to the school of Lucas Cranach the Younger ³⁵. Many patients however leave the immediate surroundings of the spa to go walking further afield. The choice of walking in the mountains, both easy and serious, is almost endless. The already mentioned limited interest in 'the world

³⁵ German Renaissance painter (1515-1586).

below' is reflected in the direction most people take. Because of the topography, and in common with Misasa, there are only two ways out of this steep valley – either down the valley to places with higher density of population or up towards the mountains and wilderness. The first leads to the old attractive market town of Ostrov with its well-preserved historical centre, good shops and cafes and restaurants. This direction is chosen by only very few patients. The main route that most of the afternoon outings take is in the opposite direction i.e. into the steep hills that rise beyond the spa towards the border with Germany that lies about 8 miles away. Most of the patients have some sort of mobility problem which, combined with the severity of the gradient of the surrounding mountains, means that people prefer to take the public bus on their way out. This takes them to the high plateau above from where they can walk back down to the spa.

Jáchymov's patients always walk in groups. These are never very large or in any way organized, and usually include between four to ten people. The 'membership' of these groups is fluid, normally consisting of guests who have met here before on often more than one occasion, and a few 'newcomers' who are also keen walkers and are looking for company of people with a similar interest. These walks invariably end up in one of the many pubs that are situated along most of the mountain roads. The walks are relaxed, people joke and form friendships. On the few occasions I was asked by one of these groups to join them I spent a very enjoyable afternoon. It also gave me an opportunity actively to participate in this previously closed part of the life of the spa guests.

Apart from walking the most popular afternoon activity, and one in which many of the spa guests take part, is 'tea dancing'. Dancing is considered by the physicians to be the perfect type of 'gentle exercise, and is provided by the three spa houses who take it in turn to put on an afternoon dance. These dances are very well attended. This is a

generation of people most of whom were formally taught how to dance and, as a result, are good dancers and visibly enjoy the activity. Most patients come well prepared for taking part in the dances by bringing suitable semi-formal clothes and dancing shoes.

Evenings

The spa guests are not limited to spending their evenings in their respective houses, and there is no real curfew. Although everyone is unofficially supposed to be back by midnight patients can be out from the time they finish their evening meal until then. Many guests watch television, play snooker or cards, read in the lounge or simply rest. Others go out, always in company, to one of the many bars or restaurants in the town, and yet others go dancing. There is an evening dance somewhere in the town on most nights of the week.

As I gradually got to know and become friendly with a particularly outgoing group of guests I was eventually invited to join them at one of these dances. I had wanted to go and observe these evenings before but felt rather uncomfortable going on my own. It was there that I realized that I had so far been unaware of an important aspect of the social life of the spa that none of the participants mentioned during the interviews. Without having been given this opportunity to participate, I indeed might have missed it.

The group I accompanied consisted of six guests, three men and three women, all in their late fifties or early sixties, and all returnees. They knew each other well and seemed to fall into three definite dancing couples. Among those attending the dance at this busy venue I also noticed several other participants of the study whom I had interviewed a few days earlier. During the interviews they all mentioned that they

were married but that they were here on their own. From their body language on the dance floor, however, it looked very much that some were already in a very close relationship with their new dancing partner.

Following this dance I went to several other dances and observed similar situations. As I gradually got to know a few of the guests from the original group quite well we were eventually able to discuss quite openly what was going on. They were all completely frank about what they saw as a 'normal' situation. Having left behind all their work and family problems they felt unattached to their normal life and free to engage properly in the life of the spa. This often included having a temporary relationship with another guest. The chronic character of the illnesses treated here called for repeat, usually annual, visits; the average number being 8.45. Those who needed to return often arranged the date of their return visit prior to leaving the spa. By being able to synchronize the dates these relationships could be renewed on an annual basis, some lasting for well over ten years. For one particular couple who have been coming twice a year for a number of years (Patients nos. 1+3 in Appendix B) this was almost like having second, but parallel, marriage. All those who were prepared to openly discuss their behaviour were quite certain that having an affair while staying in the spa made a positive contribution to the outcome of the therapy. It made them feel relaxed and well, and they therefore believed that it greatly added to their ability to heal.

"This is where I re-charge my mental and physical batteries" was how one of the long-term patients, a keen and excellent dancer, put his view.

Discussing this situation with the spa physicians showed that they were all completely aware of this behaviour. Their attitude was more than lenient; it was usually expressed by their saying: 'Healthy mind means a healthy body'. The doctors silently condoned the situation seeing these liaisons as an effective way of reducing stress and thus enhancing the healing qualities of the spa.

6.4.3 Other factors contributing to the therapeutic outcome

Guests' Likes and Dislikes

Stress reduction was again referred to as the topmost and most appreciated feature by almost all the participants. Although the men thought that this was partly due to 'getting away' from family responsibilities this was very strongly felt by the women patients. They emphasized that simply being away from the daily household chores was enough to make them forget their illness and feel better. Three (out of 12) of the women also jokingly suggested that all women, regardless of their medical condition, should be prescribed free spa treatment on an annual basis. They explained this by saying that women are usually the carers, the ones who, as a rule, look after other people. Staying in a spa felt like their 'time out' of the ordinary weight of responsibility, time when they were the ones being cared for.

There were only two exceptions who found that they were unable to leave their stress behind. In both cases these were reflections of the economic and political changes that were brought in by the 'Velvet Revolution' of 1989. Until then everyone in the country was a State employee, and as such not in the least interested in, or indeed worried about, the effect their absence might have on their work. People got used to getting paid just for being present at work rather than for doing anything useful or creative. The post-1989 attitudes are very different and people have had to learn to work harder and to take personal responsibility. Patient J.K., an electrician who is now self-employed, suffers from a chronic problem of the spine that has, for the past twenty years, required an annual return to Jáchymov. He complained to me about the fact that this time he simply had to bring his computer in order to finish some important paperwork.

"This is the first time that I have done this and I hope never to do it again. It has made a vast difference to my being able to relax and take full advantage of what the spa has to offer" were his comments.

Similarly, the case of patient R.A., the second of the two exceptions, is also related to the recent economic changes. He was spending parts of his free afternoons by dealing with telephone calls from the staff of his small chain of chemist shops. Although this was his first visit, he said that he is not happy about having to deal with “work back home”, and he would choose not to do it again. It did not allow him to take full benefit resulting from stress relief.

Social life was the second most frequently mentioned positive feature of the spa. This is where dancing and temporary relationships play an important role, but also making new friends or being in the company of others suffering from the same illnesses. Most people were engaged in some of the social activities although to very different degrees.

“The social side is an absolutely essential part of the therapy” was the most common point of view. Even those who did not engage in many of the activities referred to ‘friends’, however temporary, as playing a very important part in their experience of the therapy. Patient M.K., who was here on her fourth visit, spoke for many when she said that she had no doubt that having friends is very helpful, and gave two reasons for her feelings. First of all it makes it possible for her to spend her free time in pleasant company which is in itself relaxing and reduces her stress level. But even more importantly, it opens up a possibility to discuss medical problems openly with people who will really listen and who will often reciprocate by discussing their problems with her. She finds this ability to share her medical worries healing. J.K., another long-term user of the spa, also mentioned that for him not only is it helpful to talk about one’s illness but also realizing that some of the patients are worse off than himself made him feel better.

Most of Jáchymov's spa guests are aware of the presence of radon gas in the water and believe in its healing properties. They have listened to the balneotherapists, all of whom support the hormesis theory of radon's effect on health, and they seem to accept the view that the presence of radon in the water stimulates their body immune system to fight the inflammation processes that cause the pain. Finally, the natural beauty of the location and the unpolluted mountain air were also mentioned as an important 'healing' element. Most participants did not mention any real dislikes related to the spa. The morning timekeeping regime was not popular but was accepted as necessary.

Expectations

Unlike patients in Misasa where all the participants had high prior expectations of success those who undergo Balneotherapy in Jáchymov seemed to come with different degrees of anticipation of potential outcomes. Not all patients were positive about the cure prior to coming. Some spa guests in fact expressed a significant degree of scepticism but of those, a hundred percent will have changed their opinion by the time they were leaving. Another group of patients arrived simply hoping that the treatment would help but were lacking either scepticism or strong beliefs in the efficacy of the therapy. The largest group was however made up of those who were positive that the therapy would help. It consisted of patients who have unsuccessfully tried other places and are now emphatically hoping for success here, and those who have been here before and have already experienced temporary relief from their chronic pain as a result. They arrive with strong beliefs that this is where they are going to be helped. They in fact put this even more strongly and say that they "know that this will work".

6.4.4 The outcome

There are no measurable parameters that can be used objectively to mark the success, or otherwise, of the therapy. The only way of judging the effectiveness of this type of Balneotherapy is by what the patients report at the end of the treatment. As already mentioned, 90% of them talk of considerable improvement in their state of health and well-being. This is because they are experiencing less pain and so are able, even if only temporarily, to reduce, or often stop, their daily intake of pain-killing drugs.

6.5 Summary

This chapter gave details of spa experience as described in the patients' own narratives. It concentrated on the different levels of expectations these patients have brought with them and how, in order to fulfil these, they co-operated with the hospital regimes. Having left their habitual environment and their social structures the patients are experiencing life in a new community with different rules that the users have had to learn how to manage. Two culturally constructed ideas that affected the way the patients accommodated the new structures and their behaviour within the new rules were discussed. As stated at the beginning, Balneotherapy usually results in a 'positive qualitative change in the condition of the sufferer' (Waldram, 2000) or, as one of the patients put it, in 'recharging one's batteries'. This chapter tried to describe the cultural concepts that helped to achieve this change.

Chapter 7 Conclusions

This ethnographic study used Balneotherapy, a healing technique based on the use of natural mineral water, to look at aspects of health, illness, therapy, treatment and healing, as practiced within the cultural medical systems of Japan and the Czech Republic. The study was based on fieldwork in communities of patients in two spa locations which were chosen because of their common characteristics. Both spas practice the same type of therapy using local natural mineral water with similar properties to treat similar medical conditions and achieving similar results. The theory on which this medical technique is based can be traced back to common Greco-Roman historical origins.

The work first situated the spas geographically, historically and economically before it focuses on their medical practices. Details of the procedures that are combined in the system of Balneotherapy were then described before the thesis moved onto the patient personal experience during their illness episode. The ethnographic information found in the patients' narratives and collected during several periods of fieldwork in both places was presented. Data collected during semi-structured interviews and, whenever possible, participant observations were used to allow analysis of the culturally-based beliefs and attitudes that influenced the patients' behaviour during the period of the cure.

The three-layered structure of a system of medicine described in Chapter 6 can be expressed diagrammatically as follows:

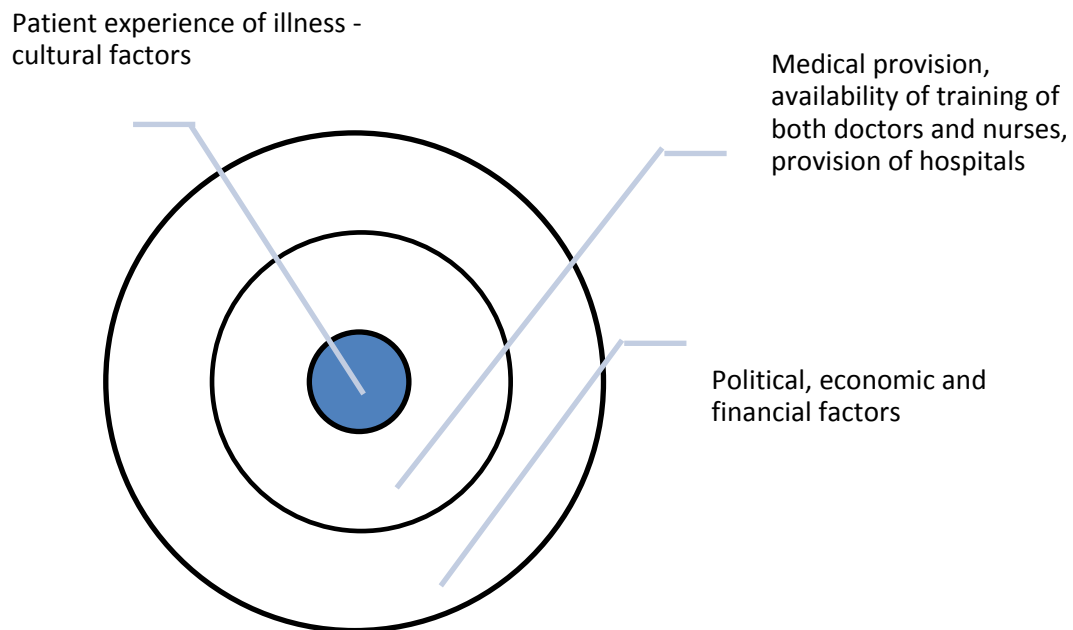


Figure 24: Structure of a system of medicine.

The external factors that form the outer two layers affect patient illness experience of the two medical systems studied in broadly similar ways. Chapter 5 mentioned briefly some of the political and financial factors and the effect they may have on the therapy. In the Czech Republic, the change of the state philosophy from communism to capitalism had a major impact on the running of the spa, and in Japan we saw how changes in the ownership of the Misasa Onsen Hospital affected its viability.

The economic and political factors are also major players in the provision of medical services that are situated in the middle layer of the structure. It is not however only the provision of training facilities that is at work here. Different medical schools may offer different medical disciplines or teach the same subjects but based on different medical theories. We saw the effect of this when we consider the theories behind the role of radon in the healing process. Again, there are great similarities between the two cultures in this area.

It is the inner layer, the one which deals with personal experience of illness that shows the biggest differences as it is here that the many cultural elements are situated. What the patients considered to be important characteristics of Balneotherapy that affect both their experience and its outcome also displays many common elements but they are often given different emphasis in the patient narratives. These culturally determined factors include awareness of the natural environment where the spas are located which is connected with opportunities to take walks in beautiful and unspoilt countryside, spiritual associations with the mineral water, lack of stress, the type of food provided by the hospitals and the taking part in the social life of the spa. These are discussed in Section 7.2.

Balneotherapy is in both countries used in conjunction with their mainstream or cosmopolitan medicine. This study looked at patients in spas that specialize in the removal of pain that accompanies chronic disorders e.g. arthritis or ankylosing spondylitis. Characteristically, these disorders are not curable, and any pain relief that might result from this treatment is usually temporary and is often repeated at regular, typically annual, intervals. This slow-acting therapy also requires not just repeated periods of treatment but also relatively lengthy stays in a spa hospital. Three weeks seemed to be the most commonly accepted period used for obtaining the maximum results in both countries. Yet another feature of the system is that many of the therapy users also suffer from other medical conditions which were dealt with by other means. While in Japan most patients were dependent on the daily intake of drugs controlling their high blood pressure problems, in the Czech Republic daily medication was usually taken for heart and circulation problems.

Even if there is no other medical condition present, the kind of chronic pain the spas are dealing with is as a rule controlled by the intake of certain classes of medicine, usually anti-inflammatory drugs. Unfortunately, as many studies have shown (Chang *et*

al., 2005; Gûnaydin, 1996) these drugs often produce unwanted side-effects, most commonly stomach or intestinal bleeding. Many of the participants stated that they were making use of Balneotherapy primarily because it was one of the few options available for avoiding the potentially negative side-effects. Others explained that although they were already dependent on some medication they wanted to minimize the amount they needed to take every day. Nevertheless, they all acknowledged that taking daily medication is very effective and the effect of the drugs can be felt immediately. As soon as they forget to take their daily dose they realized that they do not feel so well.

The drug-free action of Balneotherapy with its positive impact on the physiology and psychology of the patient is the main reason for its continuing popularity by sufferers of chronic pain. It also gives an answer to the first two research questions i.e. why is the therapy used in the first place and why does it continue to be used. The next question focuses on why it might work and on what theoretical basis it is applied.

7.1 The physiological effects of the mineral spring water on the body

Immersion in the spring water used in Misasa and Jáchymov affects the body in a variety of ways that can be divided into three categories. The mechanical effects are related to the water's buoyancy and temperature and their impact on mobility. The thermal properties of the water and their effect on surface blood vessels fall into the second category. Because some mineral resorption may occur during the immersion the chemical composition of the water, the third category, can have a marked effect on the body (Rodero Galduno *et al.*, 1999). All of these effects can be found in the Balneotherapy that is considered here. The spring water used in the healing was warm in the case of Jáchymov and thermal in the case of Misasa. Both were characterised by raised levels of radon gas. The mechanism of radon's action has so far not been

satisfactorily explained. Despite the lack of firm evidence this research found that the balneotherapists working in both spas subscribe to one of the two current theories, the theory of hormesis, which claims that at very small doses radon produces an adaptive response that has a positive stimulatory or otherwise beneficial effect on the body. They are therefore working within the same paradigm. Their views are then passed onto the patients most of whom do not have sufficient knowledge to make an informed judgement on the possible effects of radon. The study found that virtually all patients were not concerned about the possible harmful effects of radon. They were mainly interested in the likelihood of the therapy achieving its aim i.e. provide them with relief of pain. There is no simple answer to this question and its complexity will be discussed later on in the section entitled 'Outcome'.

7.2 Other factors affecting patients' spa experience

The body's physiological responses to repeated immersion in mineral spring water can be observed in all spas, and in many cultures. The physiological effects of warm or hot water on the body are reproducible and measurable. The impact of the interrelated psychological elements of this gentle and slow method of healing is however culturally constructed. As this study found however they make as important a contribution to the success of the therapy as the physiological ones. Spa come from operates on both of these elements which can be expressed by sayings found in both Japanese and Czech language. The already mentioned '*Yamai wa ki kara*' (Illness originates from ki) that introduces this work is echoed in the comments made by several Jáchymov's physicians: "Healthy mind means a healthy body".

Of the factors that were mentioned by the participants as making a positive contribution to the healing process some were common to both cultures but many were culture-specific.

7.2.1 Factors common to the two cultures

Power of nature

Nature as a contributory healing element was appreciated by almost all the participants in both cultures. In Japan the abundance of natural mineral springs offers the possibility for almost all Japanese to visit *onsen* and enjoy bathing close to nature (Guichard-Anguis, 2009b; Moon, 1997). As *onsen* are usually found in beautiful rural surroundings the Japanese appreciation of nature often links a visit to an *onsen* with the ubiquitous term *furusato*. It literally means the 'old village' but it manages to combine the natural beauty of a place with feelings of nostalgia for the lost past (Creighton, 1997; Robertson, 1988). In other words *furusato* is the nostalgic place not contaminated by Western influences where the spirit of 'old' Japan resides allowing visitors to find themselves, to discover their own roots (Creighton, 2009; Moon, 1997). Thus despite the fact that nature had a positive effect on patients in both spas, in Japan this is associated with a specifically Japanese concept. *Furusato* is not limited to an actual place but is rather everything the modern suburbs and metropolis are not (Robertson, 1988). I found that in Misasa the positive effects of *furusato* on the feeling of well-being were mostly strongly felt by those coming from large towns like Osaka or Tokyo. These urbanites came forward with praises of the sounds of water, the lack of traffic and, most often, the clarity of the air – all psychologically positive influences supporting the main elements of treatment. One of the participants, a retired professional man from Tokyo, suffers from mobility problems combined with severe asthma for which he was recommended Balneotherapy. He felt that the local pollution-free environment was so beneficial to his physical and mental health that he rented a house in the village for a period of six months.

In Europe, since the times of the Greeks and the Romans, spas have been found in beautiful locations opening up a possibility of communing with nature while bathing in

natural springs. This was considered integral to the effectiveness of spa therapy (Dubos, 1968; Dvorjetski, 2007; Porter, 1990). Jáchymov's patients did value the beauty of the location and seem to take every opportunity to explore the surrounding countryside. There was no mention of a nostalgic 'home place' but what was appreciated was the combination of deep forests, the silence, the clean air and the lack of traffic. It was for many an important contributory factor to the therapy.

Patient co-operation

Every aspect of the life of a patient of a spa hospital or a spa house is controlled by a mixture of rules set by the management and treatment regime prescribed by the physicians. These rules, which differed between the two spas and the extent to which they need to be adhered to, also had a major effect on the patients' feelings, their behaviour and thus their illness experience.

The role patient co-operation with therapy holds in the success of healing can in Europe be traced to the Greeks. One of the principles of Hippocratic medicine is that healing involves the active cooperation of the patient. Hippocrates put it even more strongly and suggested that not only did the patient's will to heal play an important part in the process of treatment but that it was in fact his duty, helped by the physician, to oppose illness (Temkin, 1991). Jáchymov's patients did seem to understand that if they wish to get better they will have to follow the prescribed regime, keep their appointments and perform the expected amount of exercise. Despite the early starts and the school-like timetables they all accepted the responsibility given to them to 'help themselves'.

In Japan there was no precise timetable for the various treatment procedures but the system put even more emphasis on personal responsibility. It was up to each patient

how to organize his or her day in such a way as to have been given all the prescribed treatments, and how diligently to perform the prescribed exercise. Confucian ideas of a man's responsibility to keep healthy were at the basis of the observed cooperation with Balneotherapy in Japan. The word patients used when describing how they engage with the therapy is the verb *hataraku* (to work). This is how they spend their days and how they deal with the various tasks set for them by their physicians. Several patients in fact classed the hospitals as places "work" places (*shigoto*) where they need to "work" (*hataraku*) to achieve their aim – an improvement of their health. This achievement-oriented behaviour is one of the key concepts learnt during childhood training and is motivated by a desire to attain certain, usually long-term, goals. The traditional unit in which a Japanese child is reared has been studied in detail by many anthropologists from Doi to Hendry and Befu to Bestor, and their work has been quoted throughout this thesis. The family exists as part of a continuing entity or *ie* (household) (Hendry, 1995a) which inspires a deep sense of social belonging as well as of responsibility and obligation. As children attain this sense of belonging and the sense of responsibility they gradually acquire the ability to be self-motivated towards achievement (de Vos, 1973). This attitude was clearly observed in the behaviour of Misasa patients who, in doing their 'work' were trying successfully to fulfil their roles as patients and thus derive a sense of personal satisfaction and therefore validation. "We have to work hard at getting better" was a common comment made by several of the participants.

Social interaction

An immense amount of trust was expressed by the patients towards their physicians. For new patients it started on the first day and for the returnees this trust seems to have carried over since the last visit. The level of trust patients feel towards their doctors may be one of the reasons why they are prepared to be so co-operative with the quite demanding regime this complex therapy imposes on them, and why they are

‘working’ hard at trying to achieve its aim. Those on the other side of this relationship, the physicians seem to be aware of how much power over the outcome their face-to-face interaction with the patients can have. I was not allowed to be present during medical consultations but was allowed to join the doctors weekly ‘rounds’ of the hospital. The Director who heads these weekly visits sat down on the bed of each patient and asked them how they felt, how their family was and if they had any problems they wanted to discuss. What was remarkable was the sympathetic and caring manner in which he did all this. All the participants in Misasa talked about the Director during the interviews as someone they trusted implicitly and for whom they were prepared to put a real effort into their participation with the therapy, and ‘work’ on their recovery.

The study found that being listened to was considered important in three different ways. Firstly the patients are expected to listen to their physicians and then, as we have just seen, also the patients are given opportunities to be listened to. In his recent work Jagosh and his colleagues found that according to the patients the doctors’ ability to listen was in itself seen as therapeutic (Jagosh *et al.*, 2011). Finally there is also the effect that patients being listened to by other patients has on their experience. Many participants mentioned that being able to discuss their medical problems openly with people who will listen with interest, i.e. most of the other patients, and who will also discuss their problems in return, was healing.

7.2.2 Culture-specific elements of spa experience

Associations with water

Focusing on *onsen* medicine brings to the surface several important and specific aspects of Japanese culture one of which is the significance water and bathing hold in the life of the Japanese. The importance of water is found in almost every part of the

daily life of the Japanese. Water is associated with the ability to create and, through its role in the removal of pollution, the power to cleanse. The ritual of daily bath taken at home is meant not only to cleanse, relax, refresh but also to invigorate partly through the inseparable link that exists between water and Shintō. Bathing is more than a simple cleaning exercise because it is meant to cleanse not only the Japanese body but also the *kokoro* (the heart or spirit) (Clark, 1994).

The belief that water has the capacity to remove pollution, including illness, can be extended to its use in the improvement of one's health. But water is also linked to feelings of enjoyment and happiness, pleasure and well-being which are the sentiments that are usually associated with the visiting of *onsen*. Recent statistics show that despite the current state of Japanese economy visiting *onsen* has remained a popular type of internal tourism in Japan and that, on average, all Japanese spend more than one day a year in this activity (Agishi and Ohtsuka, 1995; McMullen and Kornicki, 1996). It is this combination of expectation of the feeling of well-being and the belief in the water's power to purify and spiritually cleanse that affects the patients' attitude to healing processes that take place in Japanese *onsen* hospitals.

Although records of 'magical' or 'healing' springs that were found in Europe date back to the Middle Ages, water in the Czech culture does not carry the same spiritual and purification associations seen in Japan. Moreover the springs in Jáchymov are of a very recent origin and carry no religious associations. They were found during a mining operation and their healing qualities were discovered empirically and by chance, i.e. it was the miners first who experienced the water's special qualities.

What then takes the place in the Czech culture of the Japanese beliefs in the water's ability to remove illness? Jáchymov patients' narratives disclosed that for them the

degree of their attachment to the temporary community of patients and the active participation in the social life of the spa are the crucial components of the healing process.

Membership of a community

The physical characteristics of the spas, i.e. the mountainous terrain and the relative remoteness, give them a feeling of separateness from the rest of the country. To reach the spas most patients have to take a long journey which for some resulted in feeling isolated, almost rejected, by the rest of the society.

On being admitted to any of the medical establishments in the spas marks a change in status and one becomes either a 'patient' (in Japan) or, its equivalent in the Czech Republic, a 'spa guest'. Either of these categories signifies that those who have come to the spa searching for relief of pain temporarily enter a new social space, and becomes members of a new community. The degree to which these people sever their links with their normal life and to which they join this new community, however, shows marked differences between the two cultures. These differences are manifested in the way patients behave while staying in the spa which in turn affects their illness experience and also possibly the 'outcome'.

The new social space is characterized by several important properties. The first is that it tends to be a relatively undifferentiated community of equal individuals who together submit to a general higher authority. Turner, in his 'The Ritual Process' (Turner, 1969) classified these types of communities as 'communitas'. In the case of the two spas these higher authorities are the hospital management or the group of physicians.

Turner defined *communitas* as being homogeneous, unstructured opposition to the structured arrangement of positions or statuses in society. In a normally socially-structured relationship people have been conditioned to play a specific social role. As 'communitas' is 'where structure is not', it is characterized by spontaneity and immediacy in which there is opportunity for initially free and innovative relationships (Turner, 1969). *Communitas* can exist anywhere where people can be 'subverted from their duties and rights into an atmosphere of *communitas*', a situation which can be found in a healing spa hospital. Here patients come from a variety of backgrounds, have different levels of education and hold many and varied social positions but while they stay in the spa these differences seem to disappear.

The second important characteristics of this new social space stems from the fact that coming to stay in a spa for a period of about three weeks means being separated from both one's family and one's duties, obligations and responsibilities. I was able to observe a variety of effects this has on the behaviour of the patients. In Misasa, the break with one's family seems far from complete. Despite the lack of Internet connection many patients were in regular contact with their families, usually by mobile phone. Most were also very happy to talk about their families during the interviews or during informal encounters. On the contrary, Jáchymov's patients showed a very different attitude to their families. Judged by the fact that almost none of the Czech participants mentioned their families during the interview the patients seem to have entirely cut themselves off from that part of their life while staying in the spa. These differences were in turn reflected in the degree to which the participants engaged with their *communitas*. This can be shown using two of the routine daily activities in which most patients are engaged i.e. the taking of meals and the taking of walks.

Those of Misasa's patients who take their meals in the communal dining rooms do so at tables each of which can take four people. However, only rarely have I seen patients share a table, and even if they did, the social interaction during that meal was minimal. This behaviour can probably be explained in the light of childhood upbringing in Japan as described by Hendry in her book 'Becoming Japanese' (Hendry, 1986). As she points out Japanese children are expected not to talk at mealtimes and finish eating as quickly as possible. The lack of social interaction during mealtimes may in Misasa not be a manifestation of not wanting to engage with other people. Mealtimes in Jáchymov, on the other hand, were the times for busy discussion and social contact.

The second activity in which more or less all the patients take part in is walking, and I therefore used it for looking at the difference in the amount of social interaction between the spas. In Misasa where there is a limited number of possible places to walk to and where the total number of people involved in this pursuit is high, one might expect them to walk together. The opposite was in fact the reality, and most people can be seen walking on their own. To understand the significance of why these walks are solitary we are yet again turning to the *uchi-soto* classification. It seems that the reason lies in their considering the community to be a *soto* structure which does not require their participation and sharing. Most Misasa participants elucidated their behaviour as based on two factors. They first of all explained that they 'liked walking in their own time and at their own pace'. However, they also said they preferred solitary walks because they did not like having company of people they did not know well. In their patterns of friendship the Japanese tend to have a relaxed intimacy only with individuals of their own group and these participants clearly classify the other patients as being outside their own inner or 'my' group that is outside their *uchi* group. They did not consider the hospital environment to be one which consisted of people with whom they shared enough cultural knowledge to promote close involvement and

communication in various social situations (Bachnik, 1994). There was therefore no need to put an effort into creating or a long-term harmonious relationship with the other patients (Hendry, 1995a), or even to be involved with the group to the extent that they needed to put their own needs as secondary to the group (Hendry, 1992).

If collectivism can be defined as feeling of involvement in and contribution to the lives of others (Hui and Triandis, 1986) then the Misasa patients showed a distinct lack of it. They were not integrating into a temporary group represented by the spa patient cohort which would require their co-operation and call for their solidarity. In the light of what Hendry describes in her book 'Becoming Japanese' this is surprising. She discusses how, during the process of acculturation into Japanese society, Japanese children acquire the art of moving from smaller to bigger groups and how during that process they learn how to relate to members of a succession of groups (Hendry, 1986). Children therefore learn that current groups can be left and new groups entered, and that it is possible to create new solidarities (Ben-Ari, 2002). One would therefore expect them to be able to use these learnt rules and principles and in their life to engage in patterns of interaction within various novel, e.g. spa, settings (Ben-Ari, 2002). While travelling in Japan when one cannot but be aware of groups of people having a day out together. These outings are usually organized by work places or various voluntary organizations (e.g. sports clubs), and generally regarded as a form social device designed to promote and strengthen interpersonal communication and harmony or to manage conflict (Ben-Ari, 2002). In collectivist cultures, like that of Japan, this type of travel is an example of how individuals endeavour to maintain harmonious relationships and pay attention to within in-groups situations (Gudykunst *et al.*, 1987; Triandis, 1989). Walking could be considered a type of travel and thus expected to be done in a group which it is not the case in Misasa.

In contrast, Jáchymov's spa guests enter fully into their temporary community. They leave behind the 'world below' and for the three weeks they spend in the spa they immerse themselves in the life of the patient community. Mealtimes in Jáchymov are one of the examples of the level of socializing. Tables in all the dining areas are also set for four people but as the spa houses are usually full people have to share. Judging by the noise in all the dining room mealtimes are periods of lively discussions.

Jáchymov's patients are also expected to take daily walks. Most of these walks, except of those undertaken by the ankylosing spondilitis (AS) patients, are however done in groups. The AS patients do an enormous amount of exercise, but as this amount is different for each case, the sufferers take their walking exercises on their own. The rest of the spa guests walk exclusively in groups, generally sized between four and ten people. These groups are very friendly and seem to have a fluid membership with people joining in and leaving as they choose. During the many months I spent in the spa I did not see anyone taking a walk on their own.

Freedom and liminality

Whether patients actively participate in the life of the hospital community or not, while they are receiving treatment they become members of these communities and they share certain experiences. One of these is that of the freedoms they acquire by being there. On admission most patients felt that they have become 'free from' a whole host of both domestic and institutional obligations. This releases them from dealing with everyday problems and gives them a chance to step outside the context that usually constrains their actions and enter a new space characterized by the two types of freedom first proposed by Berlin (Berlin, 1969). Freedom 'from' releases them from everyday activity while freedom 'to' allows them to take part in, often playful, activities usually not available to them (Cox, 2002).

The spas where these freedoms are experienced can be regarded as the perfect setting for Turner's ideas of 'liminoid' space, a separate space that allows different types of behaviour from the one normally shown outside it (Turner, 1983). Turner expanded Van Gennep's theory of liminality based on the coming-of-age rituals (Gennep, 1960). Van Gennep's theory suggested that those taking part, which in our case are the patients, are socially and structurally ambiguous, while disconnected from and dispossessed of their current social position, status or rank and property (Deflem, 1991). Turner's contribution to this debate is in coining the term liminoid, rather than liminal, for a space in the arena of leisure where one is allowed to behave according to very different rules of conduct (Turner, 1969). This type of behaviour was indeed observed in the spas. According to Turner this space is an arena suitable for 'play' (Turner, 1977) when one is able to be involved in subversive and ludic events (Turner, 1983). I first became aware of definite elements of 'play' in the behaviour of the patients while doing my fieldwork in Jáchymov. Following that I tried, successfully, to find these also in Misasa.

Play

Turner's ideas of a space that is separate from the norm and that allows different behaviour can be applied to the situation in the spas. The psychological separation is here further enhanced by the physical remoteness of both spas. The 'world below' is allowed to be removed from one's consciousness in a manner reminiscent of the hero of Thomas Mann's novel "Der Zauberberg" (Magic Mountain). At the point of entry to the spa patients are given an opportunity to 'step out of real life' (Bateson, 1983) and to negate some of the rules or understandings that apply in on-going daily life (Huizinga, 1949). They can then engage in a new, perhaps more creative, type of activity, or 'play'.

I found 'play' to be present in the spas but at first it seemed that it only existed in Jáchymov. The manner of Jáchymov's patient's engagement in the social life of the spa points at a continuation of the long tradition of pleasure and entertainment that have been associated with European spa culture since the Romans. Many of the activities that most patients participated were not very different from those they took part in their ordinary life and thus did not qualify as 'play'. They took walks with the other guests; they went to the cinema or visited local cafes and bars and spent time talking. They did go dancing, many of them on a daily basis, but for many it again was not an unusual activity. The one 'creative' or 'playful' activity I gradually discovered was that of having an affair. Some of the affairs have in fact been going on for a number of years, and most were very openly acknowledged by the other spa guests. The physicians were also fully aware of these temporary liaisons but commented that as far as they were concerned if it made the patients relaxed and happy it had a positive impact on the results of the therapy. The 'play' was thus in the public arena and as such accepted.

Following these findings I looked deeper for an expression of 'play' in Misasa. I found that, although it existed, it was well hidden. As could be seen from Figure 1 (page 59), playful activities could be found within Japanese *onsen* culture in the Edo period (Uchida, 2009). *Tōji*, the brief interlude of rest and relaxation commonly undertaken by farming families at the end of the agricultural year, included gambling, singing, dancing and many other social activities. Was it therefore possible that the current highly controlled hospital environment experienced by Misasa patients completely excluded any possibility of play?

It finally emerged from the narratives of the two elderly male patients discussed in Chapter 6. The first was indulging in 'play' in the form of Internet gambling during his

evenings, and the second was using his free weekends for going away from Misasa and treating himself to his favourite *soba* noodles. While telling me about these activities there was a conspiratorial smile on their faces. They did not want these pastimes to be discovered and so they both quickly added “But don’t tell the nurses”. Unlike the Czech spa guests the Japanese patients clearly felt obliged to ‘play’ in secret. The two men, while fulfilling their social role of patients by outwardly displaying the proper behaviour, engaged in ‘play’; but doing it in secret. This is another manifestation of the two-sidedness of many things in Japan e.g. the *omote* and *ura* behaviour (Doi, 1986; Johnson, 1980). These two opposing concepts of front, *omote*, and back, *ura*, correspond to the other already discussed set of oppositions *soto* and *uchi*. This basic spatial distinction between the inside and the outside can also refer to the inside and the outside of an individual who acquire the ability to show the correct face accompanied by an appropriate type of behaviour in any situation (Hendry, 1995b). *Omote* is what can be seen, it is the visible, the face that is presented to the world, to the outside, or *soto*. It is associated with the so called *tatemae* or public behaviour (Hendry, 1986). *Ura*, on the other hand which, as Doi points out, means *kokoro*, or mind, heart or soul in classical Japanese (Doi, 1986) signifies that which is kept behind in the *uchi*, and which is associated with the *honne* type behaviour or the behaviour that shows one’s real feelings. The men displayed *omote* to the nurses who represented the management but I was being allowed to see their normally invisible *ura* feelings and their *honne* behaviour, and therefore able to share their secret. At the end of their designated period of treatment patients leave and return home to their families and communities. The questions that remains to be asked at this point are: “how do they feel about their experience” and “to what extent was the therapy successful”? This brings back the difficult concept of ‘success’ or outcome of the therapy.

7.3 The outcome

The absence of a clear definition of health makes it very difficult to establish the degree of success Balneotherapy may have in treating the chronic painful illnesses that are at the core of this study. The only objective parameter is the difference between the amount of painkillers taken by the patients at the start of the therapy and at the end. The majority of users claim that they either greatly reduce this amount or stop taking drugs completely. This is, however, only a temporary state that usually lasts for a period ranging between four and six months. With this being the only measurable indication of the success of the therapy the rest has to be inferred from patients' statements. Most, in fact almost all, say that by the end of the treatment they are feeling better. But, as already mentioned in the Introduction, Kleinman highlights the methodological problems in noticing instances when patients claim satisfaction with treatment received despite their symptoms persisting (Kleinman, 1980). Patients' reports are subjective, and usually depend on what sort of results they were expecting prior to starting the therapy. And that is the next methodological problem. What sort of result do patients expect? What is the final aim of the therapy? If its ultimate goal is perfect health then the reported outcome, i.e. the temporary relief of pain, may seem disappointing. But if their expectation is to feel better then patients may decide that the therapy was successful.

In Japan, expectations of a certain type of outcome were based on ideas about health that originate in Shintō, Buddhism and Confucianism where there is no dichotomy between health and illness, and both are considered to be natural states of being. Trying to achieve the perfect state of health is therefore not within this mode of thinking. Instead, therapy, in our particular case Balneotherapy, is expected to help the patient to adjust to his or her environment during a gradual healing process that

aims to return the body to its balanced state which allows for both emotional and physiological changes to take place (Lock, 1978).

In the Czech Republic, with its much more pragmatic attitude to illness and health issues, the expected degree of improvement was simply linked to the character of the disorders patients presented to the physicians. If chronic illness was what patients suffered from it was understood, by both patients and physicians, that although they expected a degree of improvement, it will be only a temporary one, and the spa therapy treatment was not going to lead to a state of perfect health.

No mention of disappointment with the results was expressed by the patients in neither of the two cultures which implies that the outcome lay within their cultural expectations.

Analysis of the data shows that attitudes towards health, illness and healing of spa patients undertaking Balneotherapy in two culturally diverse spas were subject to deeply held shared sets of cultural values. Patients experiencing an episode of illness were helped guided by these values through the respective cultural medical systems on their way towards an improvement in their health.

APPENDIXES

Appendix A –Misasa Patient Summary

	Name	Sex	Age	Local/ Outside	Treatments: P(<i>ool</i>),C(<i>lay</i>), S(<i>auna</i>), Mas(<i>sage</i>), Phys(<i>io</i>)	How was the spa chosen? (Recommendation by?)	Diet/exercise importance	Drugs (before/after)	Comments (Likes/dislikes/observations)
1	S.-san	F	80	O	P, C, Mas	Book	Diet		
2	Y.-san	M	58	O	P,M	Doctor	Exercise, walking	Many before, none now	
3	O.-san	M	79	L	P	Book	Exercise	Many before, none now	Best place, tried everything else
4	T.-san	M	71	L	P	Doctor		None now	Likes the social interaction with others
5	Y.-san	F	80	L	P	Doctor	Diet very good; weight loss	Many before, none now	Likes social part
6	T.-san	F	69	O	P, S	Found herself after trying other places	Diet	Many before, less now	Likes spa & sauna combination
7	H.-san	F	70	L	P	Local inhabitant	Pool exercises helpful	None	

8	M.-san	F	81	O	P, C	Husband	Walking	Lots/none	Was told that she will be in a wheelchair for rest of life –OK now
9	T.-san	M	60	L	P, Mas	Father; local hospital	Walking	None	
10	K.-san	F	72	L	P	Friend		Still small amount	Tried others- did not help
11	H.-san	M		O	NO Pool, S	Friend	Diet;	Yes	Good psychologically, staff make you feel good
12	E.-san	F	69	L	S, P	Went to a lecture about spas, followed that		Many still	Sauna is best, pain relief highest
13	M.-san	M	74	O	All treatment	Family	Daily walking	None	Does not like pool but uses it
14	Y.-san	M	67	O	All	Friend	Pool exercise important	None	First one in family to try
15	M.-san	F	73	L	P, S, C	Local		Drugs for blood pressure	Does it like a job- properly
16	Y.-san	F	76	L	P, C	Friend		Many prior to, not now	Bad back – now OK, P is best
17	I.-san	M	76	O	S, P, C	Found in a book by Dr.Mifune		None	Severe asthma in Tokyo, here OK, rents a house long-term

18	Y.-san	F	84	O	P, C	Friend	Does a lot of exercise; diet important	Still some	Likes social side; sees it as a job
19	Y.-san	F	72	L	P, Phys	Friend		None	Much better
20	M.-san	F		L	P	Friend		Many prior to, now less	Pool best, self-help important
21	H.-san	M	76	L	P,Mas	Friend		Still takes painkillers	Pool good , social side
22	U.-san	F	71	L	P,	Local hospital	Exercise in pool	No painkillers	Social side good
23	H.-san	F		L	P, C	Local hospital		Many drugs, but no painkillers	Social side
24	Y.-san	F	74	L	P, C	Local hospital	Exercise in pool	Many drugs, but no painkillers	Pool best for mobility, likes social side
25	Y.-san	F	61	O	P, C, Physio		Exercise, walking	Drugs still but lower dose	Social side important both for information and sharing; feels the place as isolated
26	M.-san	F	61	O	P, C, Physio, S	Family	Diet; walking – on her own		Inochi-no-sentaku; lack of stress; does some crafts here

27	O.-san	F	61	O	All	Doctor			Lack of stress; nature too very healing. Wants to go back to family & works hard to get well
28	M.-san	F	81	O	All but NO sauna	Doctor	Diet;	At home, not here	Onsen makes her feel better esp. psychologically
29	A.-san	F	69	O	All	Chance – local chiropractor		Yes - for heart problems	Happy she has made friends; radon was NOT mentioned but she found out about it
30	Y.-san	M	66	O	P, C, Physio	Family	Walks a lot, on his own		Sceptical about onsen medicine but not about onsen; positive about radon. Goes on trips secretly
31	I.-san	F	38	O	All incl. sauna	Book	Walks – on her own		Does it like a job – many times a day and well. Finds mountains cause to be hemmed in and lonely.
32	S.-san	M	71	O	P, C, Physio	Doctor			More freedom than other hospitals; secretly uses Internet for gambling. No socializing with others
33	Y-sensei	M	69	O	All, NO S	Family			No socializing. Believes in onsen; works on his lecture

Appendix B –Jáchymov Patient Summary

No	Name	Sex	Age	Medical condition	Visit no.	How was the spa chosen?	Used another spa before?	Likes/dislikes	Diet or exercise importance	Drugs, Before /after	Comments
1	L.H.	F	53	Mobility	5	Friend		Gym-will do it as a group. activity. Likes the social side -dancing	Gentle exercise	Yes/no for 6 months afterwards	Feels worse for 2-3weeks afterwards, then good
2	V.J.	M	68	Ankylosing Spondylitis (AS)	24	Friend	Y –no good	Social side good; great place for outdoor activity	Needs to do hours a day – and does		Very fit and slim – the fittest person I talked to; clearly works at keeping well
3	K.H.	M	62	Nerve inflammation	9		3x; OK but not so helpful for pain	Stress reduction important; seeing same people-good	Gentle exercise		Very sceptical at onset; feel the level of stress reduction as very good
4	Z.P.	M	64	Calcified neck vertebrae	1	Friend	No	Not sure yet, hopes it will help	Gentle exercise	No/does not know	Years of medical mis-diagnosis

5	B.B.	F	59	Mobility from childhood	11	Doctor	5x different –no difference	Lovely place to be in ; has friends here	Gentle exercise	Yes/no for many months	Feels bad for a few weeks. Believed in the cure before coming
6	J.M.	F	75	Rheumatism	14	Doctor	3 –did not like them	Meets friends, beautiful place, loves the bath	Gentle exercise	Yes - Only in winter	Therapy helps her
7	L.F.	F	53	Spine	5	Family	4 –does not like mud	Absence of stress, massage very helpful	Gentle exercise	Not really	Anticipation is good already; should be used for prevention
8	M.B.	M	69	AS	22	Doctor	2	Stress reduction; social side.	A lot usually,even more here		Feels better immediately
9	M.K.	F	66	Rheumatism	4	Family		Social aspect important; lack of stress, time for oneself	Walking a lot	All the time	Talking about problems helps
10	J.N.	M	65	Post-accident	2	Friend	1	Absence of stress; nice place	Walks a lot		Anticipates success
11	J.K.	M	61	Spine-nerves	7	Family	Several	Absence of stress, massage	A lot while here	Many /none	Knows it will help

12	M.S.	F	54	Pelvic vertebrae	1 st	Family	1	Likes all treatment and ambiance	Long walks		Knew it will help
13	Dr J.M.	M	82	Spine problem	3	Doctor		Lack of stress;			Excellent staff
14	B.M.	F8	83	Painful joints	1st	Doctor	None	Dislikes the whole regime	Walks	Occasional	Thinks it will help
15	R.A.	M	53	Dead nerve in his leg	1 st	Friend +Internet	1	It is a job to be done well	Cycling	None usually	Knew it would help
16	J.Z.	M	67	Hip problem	13 th	Doctor	1	Does not like the social pressure	Lot – mainly cycling and walking	None usually	Definitely thought it would help
17	A.M.	M	52	AS	6 th	AS Society +friends	2	Food is poor, town very run down	Extensive	No	Knew it would help
18	M.R.	M	49	AS	11 th	Family +AS	No	Pool, gym	Very active	Yes/no	Definitely thought it would help
19	D.S.	F	71	Sore knees	4 th	Doctor	None	Good mix of people	Gentle walks	No	Positive about it helping
20	J.K.	F	62	AS	25 th	Doctor	No	Prices are rising	Very active	All year round	Positive

21	El S.	M	65	Back problems	2 nd	Friend	No	Countryside	Walks	No	Believed in the therapy before coming
22	J.H.	M	60	Ankle	2 nd	Internet, self	No	Disliked the town-too run down	Active	Yes/No	Convinced it will help
23	J.V.	F	53	Rheumatism	2	Friends	6	Pool, massage		Yes Anti-rheumatic	Social side may be stressful for some
24	J.H.	F	52	Spinal pain	4 th	Doctor					Lack of stress is 50%

APPENDIX C: Glossary of Japanese terms

Japanese terms	English meaning
<i>Bakufu</i>	Shogunal government during Edo period (1603-1867)
<i>cha</i>	tea
<i>daimyō</i>	feudal lord
<i>dozoku</i>	extended household group
<i>furo</i>	Japanese bath
<i>furusato</i>	the idealized native place, the heart of Japan
<i>gawa</i>	river
<i>geta</i>	Traditional Japanese wooden footwear
<i>haha</i>	mother
<i>hataraku</i>	to work
<i>honjin</i>	lodgings (inn) for daimyō
<i>honne</i>	one's real feelings
<i>ie</i>	house or household; a family line
<i>imi</i>	ritual avoidance of certain words or actions
<i>inochi</i>	life
<i>inochi-no-sentaku</i>	washing one's soul
<i>jibyō</i>	my illness
<i>kabu</i>	tree stump
<i>Kaitai Shinsho</i>	New Book of Anatomy
<i>karaoke</i>	form of interactive entertainment
<i>kasuri</i>	Japanese ikat
<i>Kojiki</i>	The Chronicle of Ancient Matters; early 8 th Century historical/mythological chronicle concerning the origin of Japan
<i>kokoro</i>	heart or spirit
<i>kura</i>	traditional store houses
<i>kyōdōburo</i>	community bath
<i>meibutsu</i>	famous thing (locally)
<i>meishi</i>	Japanese business card
<i>minshuku</i>	country inn
<i>miso</i>	traditional Japanese seasoning made from fermented soybeans
<i>misogi</i>	ritual cleansing by bathing

<i>Mombusho</i>	Japanese Ministry of Education
<i>momiji</i>	Japanese maple
<i>mukoyōshi</i>	adopted son
<i>muraokoshi</i>	village revitalization movement
<i>Nihon Shoki</i>	Chronicles of Japan; 8 th Century historical chronicle , some later parts of which are considered factual
<i>nozomi</i>	hope
<i>o-furo</i>	bath
<i>oharai</i>	purification
<i>omote</i>	front
<i>onsen</i>	spa
<i>Rangaku</i>	Dutch (Western) learning
<i>roten-buro</i>	open-air natural bath
<i>ryokan</i>	traditional Japanese inn
<i>ryōshin</i>	parents
<i>Samurai</i>	Military nobility of pre-industrial Japan
<i>sazanka</i>	winter-flowering camellia
<i>sentaku</i>	washing
<i>shamisen</i>	three-stringed musical instrument
<i>shigoto</i>	work (noun)
<i>shizen</i>	nature
<i>shugendo</i>	Buddhists sect centered on ascetic, mountain-dwelling practice. The focus or goal of Shugendō is the development of spiritual experience and power
<i>tabi</i>	travel
<i>taiko</i>	“great” drum
<i>tatemaie</i>	public behaviour, relative to the situation one is in
<i>temizu</i>	washing of hands
<i>tenugui</i>	Japanese cotton towel/wash cloth
<i>tōji</i>	water-based healing
<i>tōjiba</i>	therapeutic resort
<i>tsumi</i>	polluting agents
<i>ura</i>	rear
<i>waki honjin</i>	sub- <i>honjin</i> (also open to general travellers)
<i>yama</i>	Mountain
<i>yamai</i>	illness/disease
<i>yukata</i>	summer kimono

APPENDIX D: Glossary of Czech terms

hosté	guests
hra	play
krušit	to mine
Lázeňský Dům	spa house
teplý	warm

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