

Pseudo-science, Public Participation and Established Academics

A Struggle for Scientific Authority in the Visoko Valley



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Daniel Uosukainen

daniel-uosukainen@hotmail.com

Instructor: Dr. D. Zandbergen

Leiden University

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Front cover illustration: Energy beam coming from the Bosnian Pyramid of the Sun

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Abstract

In October 2005, independent researcher Semir Osmanagic announced the discovery of the world's greatest pyramidal complex in the valley of Visoko, Bosnia and Herzegovina. Since then, several thousands of tourists visit the small town of Visoko and the sites surrounding it, while hundreds of volunteers from all over the world participate in Osmanagic's project to uncover the pyramids from underneath the soil. Locally and internationally, established scholars have strongly opposed this project. They see it as a pseudo-archaeological endeavour that misleads the Bosnian people and puts existing archaeological heritage in the Visoko grounds in jeopardy. The project, however, continues to maintain its popularity to this date. This thesis argues that archaeologists' explanation as to why their rational argumentation fails is limited. A focus is set on the way in which different parties in Visoko use scientific argumentation to attain authority in the debate on the archaeological nature of the Visoko valley. By including cross-disciplinary literature discussing the way institutional science engages in a dialogue with other domains and public groups, this thesis offers a wider perspective for explaining the nature of the struggle for scientific authority in the Visoko valley.

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Aknowlegdements

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Introduction

Background

In October 2005 an American Businessman and independent researcher of Bosnian origin, Semir Osmanagic, publicly announced the discovery of the world's greatest pyramid and pyramidal complex. This featured three major pyramids and additional tunnels and structures near the town of Visoko in Bosnia-Herzegovina, 40 km from the capital Sarajevo. Osmanagic claimed that Visocica, a hill of a pyramidal shape oriented along the main cardinal points, is not natural but man made and is convinced that the shape of the hill was formed by a buried pyramid (Bohannon 2006: 1719, Kampschror 2006: 23, Woodard 2009: 2, Osmanagic). Visocica hill was renamed the Bosnian Pyramid of the Sun after the Aztec Pyramid of the Sun in Teotihuacan, Mexico (Osmanagic 2005). The two other similarly shaped and oriented hills he dubbed the Pyramid of the Moon and the Pyramid of the Dragon (Woodard 2009: 1, Kampschror 2006: 23). These names were inspired by his previous research as alternative researcher in Latin America, where he believes the Mayan civilisation had alien contacts from the Pleiades (Rose 2006).

In the same year Osmanagic, owner of a successful metal fabrication company in Texas and author specialized in pyramids around the world, took three other major steps apart from his announcement to establish the idea of the Bosnian pyramids. He wrote the book *Bosanska piramida Sunca, Otkrice prve evropske piramide* (2005), or *The Bosnian Pyramid of the Sun: The Discovery of the first European Pyramid*. He also set up the non-profit foundation; Archaeological Park: The Bosnian Pyramid of the Sun Foundation (which I will henceforth refer to as the Foundation). Finally, he was able to secure digging permits from the authorities and start minor diggings (Woodard 2009: 2). For reasons of security, the European Union Peace Force (EUFOR) deployed over 5000 troops in the area¹.

Osmanagic also took initiative to invite Bosnian scientific institutions to test his hypothesis and investigate the hills. Using satellites for thermal and radar imaging in late 2005, Amer Smailebovic, a geophysicists from the University of Sarajevo noted the geometric peculiarities of the shape and the "out of the ordinary" readings from Visocica hill, and advised Osmanagic to seek geological and archaeological confirmation (Bohannon 2006: 1719). Eventually the University of Tuzla, conducting an initial geological analysis of

¹ Reasons for this deployment remain unclear. What I heard during my stay in Visoko was that the reasons for the deployment of troops given by EUFOR was 'hooligans', although Visoko was a quiet and peaceful place. In January 2006 the head of the European Archaeological Association was contacted by a EUFOR officer to ask if the EAA knew anything about "a pyramid"(Harding 2007). Although the deployment may be only a precaution of some sense, Visoko locals and volunteers strongly believe it has to do with the pyramid sensation.

the hill in early 2006, concluded that the hill consisted of the same geological material as the other common hills in the area (Woodard 2009: 2). Before the Tuzla report came out, however, Smailebovic's report hit the headlines of Bosnian papers as "Satellite imagery confirms Osmanagic's discovery of pyramids in Bosnia" (Bohannon 2006: 1720).

By April 2006, the story of the Bosnian Pyramids had become an international mediatised discussion. Reporters representing agencies and news channels such as AP, Reuters, ABC and CNN visited the site in Visoko picking up the thread of the BBC, who in the fall of the previous year had monitored and translated Osmanagic's announcement in Bosnia's highest-circulation daily, *Dnevni Avaz* (Kampschror 2006: 27). Through these media giants, Osmanagic's story about the ancient pyramidal valley that he believes lies under the surface of Visoko soil, was able to spread across the globe. These agencies also reported how tourists came by the thousands to see the sites being uncovered by hundreds of local volunteers. Also the locals from Visoko were shown to happily sell pyramid-shaped trinkets in the streets to the tourists pouring in.

The case also caught the attention of archaeologists, geologists and other scholars abroad. Convinced that there can be no pyramid in Bosnia, some of them reacted strongly in the media, criticising all the elements of the story: Osmanagic's claims, the public that believes it, the volunteer work used at the dig sites and the media that propagates the story itself. Beth Kampschror, writing for the journal *Archaeology*, criticised major news agencies for being careless to treat the story as a "cute human-interest story", which actually just "feeds the fire" of public enthusiasm amongst the local people and journalists, who are ill-educated (Kampschror 2006: 27). Mark Rose, also writing for *Archaeology*, places it in a context of pseudo-archaeology:

And there it is. A self-described archaeologist, who believes the Maya and others are descended from Atlanteans who came from the Pleiades, has been accepted as a legitimate researcher by many news outlets. His ideas of early pyramids in Bosnia, which is simply not possible, has been accepted as a major discovery. How could this happen? (Rose 2006).

Scholars were also very concerned about the existing archaeological heritage best left in the ground until resources could be gathered to conduct a professional study of the area. Enmer Ivanovic, the former director of the National Museum in Sarajevo said that letting volunteers conduct excavations would be the equivalent of "letting me, an archaeologist, perform surgery in hospitals." (Bohannon 2006: 1720). In addition to the project itself, scholars criticised the Bosnian government for not stepping in and the Bosnian public for supporting Osmanagic and his project (Pruitt 2009). Supporters even included politicians like the prime-minister and the president. Archaeologist Curtis Runnels comments that "people who believe

these stories, especially when they are presented without evidence, are fools” (Runnels in Rose 2006).

Criticism of Osmanagic and his pyramid programme by established scientists has done little to put down the attention Osmanagic and his story of the Bosnian Pyramids enjoy. After having tried educating the public and falsifying the so-called scientific theories about the pyramid’s existence, archaeologists criticising the project still wonder how the pyramid project continues to enjoy the support of a both local and international public (Pruitt 2009). Established scholars such as archaeologist Richard Carlton “have no idea what to do other than to present reasonably argued opposition” (Bohannon 2006: 1862). The project continues to proceed with the consent of the Bosnian government (Woodard 2009). Since Osmanagic’s announcement of his discovery, thousands of volunteers have participated in the yearly international summer camp for volunteers. The volunteers helping out in the excavations make the whole project possible. They are attracted by the many websites and forums dedicated to the Bosnian Pyramids, as well as the lectures and talks on TV-shows that Osmanagic continues to give on a regular basis to this date. Between October 2005 and 2009 (figures up till current date unknown), the sites in Visoko have had an estimate of 400 000 visitors in the form of local and international tourists and volunteers (Woodard 2009: 1).

Entering the Visoko valley

In 2008 a friend with whom I shared interests in alternative history introduced me to a website with interesting claims. It stated that in 2005 the world’s largest pyramid had been discovered in the valley of the town Visoko, Bosnia Herzegovina. The story lost my attention only to re-emerge again in 2011, when a possibility to visit Visoko presented itself during a student trip to Bosnia. With another interested student I arrived in Visoko with a great pyramid-shaped hill on the background. Soon after we had gotten to the entrance of a tunnel-network said to lead directly to the pyramid, we bumped into Dr. Sara Acconci. The archaeologist was working for the pyramid project and was accompanied by a visiting journalist who was also interested in this curious case. Acconci told us about the project and how the work was proceeding. One of the stories she told concerned the resistance the Foundation met from the academic world and the recognition they sought from mainstream science, but never received.

Intrigued but not knowing what to think of this bizarre and complex story, we decided to join the volunteer programme for ourselves. Old interests in ancient history were instantly rejuvenated by the sight of this mighty hill. The promise of being able to participate in possibly uncovering something substantial about lost civilisations that I had only read about provided an opportunity unheard of. And all of this in an exciting atmosphere of like-minded

young adults from all over the world! After having heard the story from an archaeologist who sounded reasonable in every way, I couldn't believe why the project could have been abandoned by mainstream science. While I did expect that a project lacking in funds and being dependent on volunteer work might also lack in quality and efficiency, I saw this as a result of mainstream science not wanting to help.

In the late summer of 2012 as we joined the international camp for volunteers. About 50 volunteers from several countries around the globe had gathered at the local motel where they would be staying during the 7th 2-week shift of that summer. The volunteers consisted of a wide range of nationalities, age and background. Each wanted to find out about the pyramid-shaped hill that dominated the Visoko landscape. After a few meetings, this varied group soon discovered a common tone in conversations around topics like esoteric spirituality and global conspiracy. Before the shift would get to work, barely using anything more than shovels and pick-axes, presentations and guided tours to the dig-sites were given by the lead archaeologist² and the project founder Semir Osmanagich.

Arriving at the question

We were presented with a set of evidence about the nature and existence of the pyramid. The evidence, presented as scientific evidence, was mainly based on the unusually symmetric shape and orientation of Visocica hill, which alone proved that it couldn't have been formed by nature. In addition, the abnormal thermal as well as geo-magnetic properties of the hill in relation to the ordinary hills adjacent to Visocica, were to prove its uniqueness. Even the presence of over five-thousand EUFOR troops, deployed to the area shortly after Osmanagic's announced his discovery, was taken as an indicator that the Foundation was onto something and that the 'powers to be' knew it.

All of this pointed out that the hill was unnatural and therefore had to be a pyramid. In the face of the evidence presented, the criticism by established scientists was judged to be narrow-minded and ignorant by Osmanagic and the archaeologist working for him. This I found a most interesting and confusing situation. Members of the pyramid project, criticised of their unprofessionalism and pseudo-science by established scientist, or what the members of the Foundation called 'mainstream science', used scientific evidence to validate the existence of the pyramid and challenge scientific institutions.

What was going on? This was not just about two scientific statements in an academic debate. Not only did the Foundation of the Pyramid of the Sun and the objecting party in the form of professional researchers and institutions make conflicting scientific claims. Both

² Dr. Sara Acconci is no longer the lead archaeologist of the project, and I prefer to leave the name of the new one unmentioned.

parties also took a claim on science, one calling the other “pseudo-scientific” and the other responding by calling the first “unscientific in its ignorance”. This was confusing to me at first, because naively I had for long taken for granted that science had authority over itself and that no multiple interpretations of it existed. It sounded more like a debate between religions about God. Who then has claim over science? What was clear from this case was that being scientific, or judging the other’s way of being scientific, played an important role in claiming authority in the debate. For me, the question about the nature of the hill quickly became a secondary interest. What was going on? Why was it so hard to get a clear idea of the true archaeological nature of the Visoko valley? What was blurring the picture? The situation which I perceived was one in which acquiring a grounded view of the true archaeological nature of Visoko and the situation surrounding the pyramid project seemed impossible.

On the one hand, Osmanagic has until this date come up with little more than georadar, thermal and electromagnetic readings to back up his pre-determined hypothesis. While the anomalies in the readings of these probings do show that Visocica hill differs from adjacent hills, it does not prove it is a pyramid per-se. On the other hand, established scientists have done little more than to prove that Visocica hill consists of the same geological material than the other hills. This again is not enough for the supporters of the pyramid hypothesis to prove that the hill is not manipulated by man and no further studies by established scientists have been conducted to disprove the pyramid theory. Moreover, while a rich body of archaeological heritage is expected to lie in the Visoko grounds, featuring material from medieval, Roman, Illyrian and Neolithic periods, even established scholars can only speculate the archaeological importance of the Visoko valley. This is because until today, no large-scale survey or excavation has been conducted (Bohannon 2006: 1719-1720, Kampschror 2006: 27). Since truth claims from both established scientists and Osmanagic about the archaeological nature of the Visoko valley are compromised by the lack of more solid evidence, this has resulted in somewhat of a stalemate. Osmanagic fails to receive the recognition of scientific institutions which he has sought, and established scientists remain baffled as the pyramid project continues to operate (Rose 2006, Bohannon 2006, Pruitt 2009, 2012).

Having had an interest in both alternative and mainstream history, I could understand how conflicting accounts about the ancient past could prevent a clear picture from emerging as one could never go back in time to effectively verify the situation. But here the conflict between established scientists and the Foundation that undermined any uncompromised scientific and archaeological investigation of the valley, as also preventing a clear picture of the situation in the present. The question of the authority of and over its relationship to science led to my interest in writing this thesis as search for a measure of clarity.

Research question and the aim of this thesis

Before stating a definitive research question, the opening question that led to writing this thesis serves as a basis for formulating it. If it is the struggle between established science and the Foundation, the question asked here is: What is the nature of the conflict that unfolded in the Visoko valley? What I have identified as relevant elements in this conflict are notions of 'good' and 'bad' science, which are projected upon each other in terms of 'mainstream science' and 'pseudo-science'. These are then used in a struggle for authority over the truth about the archaeological nature of the Visoko valley.

In Pierre Bourdieu's terms science, just like the arts, religion or the family, could be seen as a 'field'. A 'field' is a relatively autonomous arena which are determined by struggles between dominant and subordinate factions, each attempting to subvert or defend the legitimacy of existing practices, tradition, new influences and the meanings assigned to them (Bourdieu 1993 in Appelrouth and Edles 2008: 694). As I will later show in detail, there is a general understanding in sociological, anthropological and STS literature that the authority of science (and as science) is not clear-cut and absolute. This counts within the field, like Bourdieu suggests, as well as towards the public and other fields such as religion, who also seek legitimacy in society (Hess 1993: 256). Science as a 'field' is a valid illustration of the struggle between factions, in the middle of which volunteers and others trying to find out about the nature of the hills and the archaeology of Visoko valley find themselves. It is in the study of this struggle that this thesis aims to find a key to explaining the confusing situation surrounding the Bosnian pyramid case.

The aim of this thesis is to understand the struggle between different factions in which conflicting positions are claimed within science, which again prevents research being conducted without compromise or in cooperation. Thus the research question can be formulated as follows:

What is the nature of the struggle for scientific authority in the Visoko valley?

With this thesis I aim to contribute to bringing clarity to the stalemated situation, which leaves room for doubt and speculation about the ancient past and the truth about the archaeological nature of the Visoko valley.

A note on methodology and scope

A few important things need to be pointed out in regards to this thesis. It was after my return that I decided to write this thesis and alas I have not recorded important details and information in an ethnographically responsible way. I am therefore unable to address the full spectrum of the situation in Visoko, which would require a full-scale ethnography in which the

effect of the Bosnian socio-political context on the pyramid debate could be investigated further. While I do use my own reflections and experience in Visoko as material, quotes and facts will mostly be derived from related journalistic, archaeological and other scientific sources.

Another note concerns the limited factual sources and accounts about the Foundation and Osmanagic. Questions generated by a limited account have puzzled many both inside and outside his Foundation and have left room for speculations about Osmanagic's true intentions. Important details, such as how he got the digging permits, what the nature is of his political and economic ties and intentions have not been available and cannot be answered in this thesis. Nor is it the ultimately the aim here.

Contents and chapter outline

The popularity of pseudo-archaeology is a widely discussed issue amongst archaeologists at large (Schadla-Hall 2004, Fagan 2006), as it is in the case of Visoko. Although my focus lies more in studying the debate between established scientists and the supporters of the pyramid programme, it cannot be seen apart from the socio-political context of the Bosnian people. Cambridge archaeologist Tera Pruitt for instance points out that the sensational story of the pyramid gives hope to the war-weary Bosnian people in a political and economic struggle. The people, including educated politicians, would rather cling on to that hope and the nationalistic and economic boost it provides than listen to (mostly foreign) established scientists who try to educate them for the better (Pruitt 2009). However valid it may be, her explanation paints the situation as a largely local one, whereas in recent years almost all of the volunteers have come from abroad. When Osmanagic was presenting the project and the sites to a group of funders and 'friends of the Foundation' during my stay, they too came mostly from North America and elsewhere in Europe. Therefore Pruitt's explanation leaves out a broader, global context when it comes to the support base of the Bosnian pyramid project, which archaeologists and sceptics call pseudo-archaeological (Pruitt 2009, 2012, Harding 2007, Kampschror 2006, Woordard 2009). While archaeologists such as Garrett Fagan (2006) and Tim Schadla-Hall (2004) discuss pseudo-archaeology more globally, even mentioning global support bases for pseudo-archaeology such as New Age believers, this aspect has been left out in the case of Visoko and its alleged pyramids.

By comparing and contrasting the Bosnian case, which I will use as a case study and example of a struggle for scientific authority, to theory and cases in multidisciplinary literature, I aim to include the global support base, which the pyramid project enjoys, in my analysis. In addition to a body of archaeological literature on cases of pseudo-archaeology the discipline's relationship with the public (Merriman 2004, Fagan 2006), the struggle for

scientific authority is a topic discussed largely from many aspects in multidisciplinary literature. Science and technology scholars such as Alan Irwin (1995) and Mark Brown (2009), who adopts a perspective from political studies, consider (institutional) science as opposed to the non-scientific public, towards which it asserts its authority. Other scholars such as religious historian Wouter Hanegraaff (1996, 2012) and anthropologist David Hess (1993) provide useful literature on the dialogue and relationship between the academic and the esoteric, as well as the struggles for legitimation and authority that characterise them. Two main trends in the literature on the struggle for scientific authority and the examples above can be identified. One is characterised by its focus on science-public dialogue and relations, and the other by science-religion dialogue and relations. This will be reflected in the contents of the chapters which are outlined as follows.

In the first chapter I will present three narratives: one of Semir Osmanagic, the discoverer of the pyramids and founder of the pyramid project, one of the established scientists criticising the project and one of the volunteers as engaged members of an international public. As the intention of this thesis is to gain insight in the struggle for authority about the Visoko valley and the pyramid project, I intend to distinguish the different discourses that surround them. A deeper understanding in these different discourses is necessary for analysing them in further chapters. Also, it is a good place to start since it is in the middle of them where many people find themselves when first being introduced to the pyramid case in the Visoko valley.

In the second chapter I will concentrate on the attitudes of established scientists towards public participation and science-public dialogue. This focus allows comparison with archaeological, STS and sociological literature in which public participation projects are discussed in relation to science-public relations and dialogue. In this literature the term 'public' is ambiguous and is meant to be applicable for a large variety of non-academic but scientifically engaged people. Discussions in this literature are applicable to the volunteers and engaged members of the international and local Bosnian public, the voices of whom I also present in this chapter. What I intend to extract from the theory and practical cases in archaeology, natural and environmental sciences, is the way in which scientists and engaged members of the public legitimise their attitude towards each other, and how this shows in the Bosnian case.

the third chapter I will focus on the scientist's concerns about the pyramid project as pseudo-archaeology. Archaeologists generally recognise that religious beliefs and worldviews are involved in many cases of pseudo-archaeology (Schadla-Hall 2004, Fagan 2006). This is especially true when looking at Osmanagic's rhetoric, previous research and ideas about the pyramid as well as the basis on which volunteers connect in the pyramid programme. Many of the topics of discussion and free-time practice amongst volunteers and

Osmanagic's beliefs about the pyramid can arguably be related to New Age. As such, the second analytical perspective will focus on science-religion, or more specifically, science-New Age dialogue. The work of scholars such as Wouter Hanegraaff (1996, 2012) will contribute to explaining how New Ager's fascination of modern science and established science's responses to so called "New Age Science" are essential to understanding the dialogue surrounding the pyramids in Bosnia.

Chapter One

The Visoko Valley, Subject to Many Truths

I have outlined three important and dominant narratives in this chapter, which play an important role in the struggle for scientific authority in the valley of Visoko. First I will present Osmanagic's narrative about his discovery and the pyramid project. I will also show his background as a researcher, which is relevant to understanding his angle of approach to the project and its critics. Second, I will go deeper into how established scientists launched their criticism of the pyramid project and what this criticism is based on. Finally, I will go into the perspective of a groups of volunteers. Their devotion for the pyramid project is not only tested by the conflicting accounts of Osmanagic and his critics, but also by insider accounts and complaints of the volunteer programme which lacks equipment and organisation.

1.1 Semir Osmanagic as a researcher

Since 2007, Semir Osmanagic holds a Ph.D. in the Sociology of History from the University of Sarajevo. His doctoral dissertation focusses on challenging general archaeological views of the Mayan civilisation which depict the Mayans are merely an "Indian Tribe" who flourished after the 10th century. Osmanagic claims that the Mayan were a true civilisation, much older than generally claimed and extinct after the 10th century, capable of solving complex technological problems. These include acoustic engineering, mathematics, astronomy and quartz head skull technology (Osmanagic 2013). He also teaches as an Anthropology professor and he is the director of the Center for Archaeology, at the American University of Sarajevo (AUBih 2013).

Osmanagic's academic achievements in fields relevant to ancient history, anthropology and archaeology are recent, acquired after his announcement of the pyramid discovery. Before his academic career in relevant fields, he had travelled to countries such as Mexico, China and Egypt to independently study the pyramids there. In 2004 he published the book *The World of the Maya* (Osmanagic 2004). Here he claims that the Mayan civilisation had connections to aliens from the Pleiades stemming from ancient Atlantean times. According to Osmanagic, humanity will be uplifted into a new age at the end of the 26 000 year cycle of the Mayan calendar after an age of darkness (Osmanagic 2004 in Rose 2006).

Despite the importance he attributes to science and scientific research, Osmanagic criticises mainstream scientific community, for being secretive about important information regarding the history of humanity (Osmanagic 2008a, 2012). Already before his alleged

discovery in the Visoko valley, Osmanagic has been highly critical of established science and history. He says that the history children are taught at school is a lie and that many scientific and historic truths, like those about the pyramids all over the world (not only in Egypt or Mesoamerica), are being kept secret from us. He goes as far as to accuse standard archaeology to be the work of Masonic cliques (Osmanagic 2004, 2008, 2012, Kampschror 2006: 24). When asked about the validity of his project and his previous research, Osmanagic replied: "I am not interested in the approval of elite scientists. This project is for the people" (Bohannon 2006: 1720).

1.2 The Bosnian pyramids

The Bosnian Pyramid, Visocica Hill, is the first European pyramid to be discovered and is located in the heart of Bosnia, in the town of Visoko. The pyramid has all the elements: four perfectly shaped slopes pointing toward the cardinal points, a flat top and an entrance complex. On top of the pyramid are also the ruins of a Medieval walled town, once the base of a Bosnian king Tvrtko of Kotromanic (1338-1391). Because of its similarities to the Pyramid of the Sun in Teotihuacan, Mexico, it has been named the "Bosnian Pyramid of the Sun" ('Bosanska Piramida Sunca'). There are also a four more ancient structures on the site, the Bosnian Pyramid of the Moon ('Bosanska Piramida Mjeseca'), Bosnian Pyramid of the Dragon ('Bosanska Piramida Zmaja'), Bosnian Pyramid of the Love ('Bosanska Piramida Ljubavi') and Temple of the Earth, ('Hram Zemlje'). We have already dug out stone blocks which I believe are covering the pyramid (Osmanagic's announcement in October 2005 cited on the website www.bosnianpyramid.com).

According to journalistic sources and the story Osmanagic told the volunteers when I was in Visoko in 2012, he was in Bosnia to promote his books on alternative history and the Mayan Civilisation when he visited a museum at the summit of Visocica hill topped with the ruins of Visoki, the seat of Bosnian medieval kings. "What really caught my eye was that the hill had the shape of a pyramid. Then I looked across the valley and I saw what we today call the Bosnian Pyramid of the Moon, with three triangular sides and a flat top." Upon consulting a compass, he concluded the sides of the pyramid were perfectly oriented toward the cardinal points (north, south, east and west). He was convinced this was not "the work of Mother Nature." (Woodard 2009: 1, Kampschror 2006: 23).

In addition to the hills that according to Osmanagic are structures on the surface, volunteers have been exposing a tunnel system underneath the Visoko valley and the Visocica hill, which according to Osmanagic connects the surface structures with each other. He claims that the conglomerate stone blocks uncovered on Visocica hill in 2005 are

concrete and much harder than the concrete made today. Osmanagic's explanation is that it was manufactured by a civilisation that was much more advanced than ours (Osmanagic 2008). The geometric qualities and orientation of the surface structures, the underground structures and the best quality concrete are according to him enough to be sure of the existence of a pyramidal complex (Osmanagic 2012).

Until recently he has believed the pyramids to be at least 12.000 years old. The age was first deducted from the depth of the soil covering the blocks that Osmanagic believes is masonry. In September 2012, the age estimate of the pyramids was increased. The lead archaeologists of the pyramid project announced that a C14 radiocarbon dating on organic material found on the conglomerate layers (concrete blocks in Osmanagic's terms) dated the organic material to be 24,800 years old, with an error margin of 200 years (SB Research Group 2012). According to Osmanagic, the pyramid has significant energetic properties. In his book *The World of the Maya* (2004), he considers that by the end of the 26 000-year cycle of the Mayan calendar in 2012, humanity will be raised to a higher level and an age of darkness that has been oppressing humanity will be overcome (Woodard 2009: 2) . In June 2006, one of Osmanagic's goals was to complete excavations by 2012, in order to "break a cloud of negative energy, allowing the Earth to receive cosmic energy from the centre of the galaxy" (Osmanagic 2006).

Organized by the Foundation, The Hidden History conference, as well as the International Scientific Conference on Bosnian Valley of the Pyramids (ICBP) held in 2008 and 2011 have been expressions of Osmanagic's intention of openness to towards the public. On the Foundation website they are listed as a condition for cooperation with scientific, educational, independent, alternative and spiritual groups and individuals (piramidasunca.ba, visited 14-1- 2013). He has also been invited to many other conferences, such as the International Geological Congress in 2008, where he has presented his evidence, which he bases on systematic scientific research and geo-archaeological methodology (Osmanagic 2008b). During the Hidden History Conference in 2012, Dr. Slobodan Mizdrak, a Croatian electro-engineer and physicist presented the results of an experiment conducted on Visocica and adjacent hills in April 2012 (SBRG 2012). This was to study the electromagnetic and ultra sound phenomena that had been measured earlier by a multidisciplinary team led by the University of Trieste, SB Research Group. The team installed several sensors on Visocica and adjacent hills and used methods of triangulation to pinpoint the location of the electromagnetic field. The gathered data showed a high concentration of electromagnetic energy at the top of the pyramidal hill (SB Research Group 2012). The resulting electromagnetic beam of 28kHz and 13 feet radius, which is estimated by the research team to rise many hundreds of meters above and below the

pyramid, was depicted on almost all leaflets, books and information panels of the Foundation during the time of my visit (see front cover of this thesis).

Osmanagic has been quite open about his idealistic intentions regarding the pyramid project from the start; rewriting history and uplifting humanity. He has also been equally open about the commercial intentions of the pyramid project. In 2006 he revealed his plan to build three archaeological parks, hotels, a museum and new highways (Bohannon 2006: 1720). At the end of his presentation in the Hidden History Conference of 2012, he stated that due to the obstacles in the cultural and political establishment, as well as the lack of funds, the future of the project would be in the combination of scientific research and archaeological theorem with commercial efforts. He then presented a plan of a complex of which the buildings were miniature replicas of the greater pyramidal complex. This included hotels, museums, conference rooms, healing facilities and archaeological facilities (Osmanagic 2012).

Despite his grand commercial plans, Osmanagic argues that his quest for truth is primary. In 2011 he was invited to give a presentation at the Linnaeus University in Sweden. There he was asked if he would agree that the truth about the pyramids didn't matter at the end of the day, since the project has done so much for the Bosnian people in terms of tourism. Osmanagic disagreed: "I am a researcher; I am a scientists... It is good that the country will benefit...but [this] is secondary" (Holtorf and Hilton 2011: 50). Osmanagic denies ethnic and nationalistic interests, pointing out at the overwhelming public support he enjoys not only amongst the Bosniak, but also the Croat and Serb population of the Balkans. "These are not Bosniak or Muslim or Serb or Croat pyramids, because they were built at a time when those nations and religions were not in existence." He says his project should "unite people, not divide them." (Woodard 2009: 3, Osmanagic 2008, Kampschror 2006: 25).

1.3 The reaction of established scientists to the pyramid project

Some credentialed scientists, such as Dr. Slobodan Mizdrak have participated in the pro-pyramid conferences arranged by the Foundation. Other have and supported Osmanagic's view and confirmed his theory about the pyramids. Mostly, however, Osmanagic and the pyramid project have been met with strong opposition and critique from established scientists and scientific institutions both locally and on an international level.

After Amer Smailebovic's report in 2005 had been interpreted in the headlines of Bosnian newspapers as: "Satellite imagery confirms Osmanagic's discovery of pyramids in Bosnia", Smailebovic visited the sites of Visoko in April 2006. What he found was a situation that he described as "chaotic". He thought that no effort had been done to properly investigate the geospatial anomalies that Smailebovic had advised Osmanagic to do

(Bohannon 2006: 1719). In the same month when the excavations had started, 21 Bosnian historians, archaeologists and geologists signed a letter published in several Bosnian newspapers opposing the project that they found amateurish and unprofessional (Kampschror 2006: 25, Woodard 2009: 4). Like many of her colleagues, the Bosnian National Museum's expert in prehistoric archaeology Zilka Kujundzic-Vejzagic believes rich archaeological heritage to be in danger due to volunteer work. In addition to many medieval, Roman possibly Illyrian, Greek and Celtic sites, the largest Neolithic settlement ever found in Europe is located in the Visoko area, which in respect to its archaeological significance has remained under researched due to the lack of resources (Bohannon 2006: 1718). Smailebovic conducted further research in Visoko with other geologists in May and June 2006 but according to him, Osmanagic had ignored their detailed report, stating that the majority of the landscape features were created by natural forces and that meticulous archaeological work was needed to investigate if humans were involved in any way (Bohannon 2006: 1719-1720).

Sympathising with their Bosnian colleagues and disagreeing with Osmanagic's hypothesis about the pyramids, foreign scholars also responded to the pyramid project and the efforts of their Bosnian colleagues to stop it. In a response to an article published by the London *Times*, professor Anthony Harding, head of the European Archaeological Association (EAA), wrote a letter to the editors which was later published:

The situation of professional heritage management in Bosnia-Herzegovina is, since the Bosnian war, in a poor state, with a tiny number of people trying to do what they can to protect their rich heritage from looting and unmonitored or unauthorised development. It adds insult to injury when rich outsiders can come in and spend large sums pursuing their absurd theories (the construction of a colossal pyramid so large that it dwarfs even those of Egypt or Mesoamerica? 12,000 years ago?), in ways that most other countries would never countenance, instead of devoting their cash to the preservation of the endangered genuine sites and monuments in which Bosnia-Herzegovina abounds (Harding 2006 in Rose 2006).

In June, the Foundation and Sulejman Tihic, the chairman of the Bosnian three-member presidency, sent an application to UNESCO to evaluate the Bosnian Pyramid Valley and list it as a UNESCO site. In order to block this motion, 25 scholars from 6 countries under the lead of Anthony Harding and the EAA wrote and signed a letter to UNESCO stating that Osmanagic is conducting a pseudo-archaeological project which threatens to destroy the existing archaeological heritage that lies in the grounds of Visoko valley, and to undermine local heritage management (Woodard 2009: 4).

Osmanagic's beliefs about extra-terrestrial and supernatural involvement with the pyramid and the Maya, as well as the fact that he had no relevant academic credentials at the time of his research, has led many established scientists to see his work as a classic case pseudo-archaeology (Woodard 2009: 1, Pruitt 2009, Harding 2006, Kampschror 2006: 24). They think that Osmanagic's work lacks solid archaeological evidence and that he pre-formulates conclusions and results to validate the hypothesis (Pruitt 2009: 58). In their articles in scientific journals, scholars compare Osmanagic and his project with other classic cases of pseudo-archaeology in which the existence of ancient super-civilisations with mystical energies and huge monuments is claimed. Scholars say that such theories are believed by the public because it is what they want to believe (Kampschror 2006: 25, Woodard: 4, Rose 2006, Pruitt 2007, 2009, 2011). Mark Rose, editor of the online version of the journal *Archaeology* published by the Archaeological Institute of America situates the story as follows:

If you want to categorize this farce, it seems a standard-issue "amateur/maverick confounds establishment with great discovery" story, which no doubt makes it appealing to uncritical reporters looking for a big story. This kind of tale is a staple of the pseudoarchaeology or fantastic archaeology genre. And the term "pyramidiot" has been applied to those obsessed with pyramids and who offer strange interpretations of them on websites and in books and television programs (Rose 2006).

Scholars widely think that the Bosnian public's supports Osmanagic's pseudo-archaeological version of the story about the pyramids to the ethno-nationalistic for historic and economic reasons. Anthropologist Philip Kohl writes:

When the Iron Curtain collapsed, all these land and territorial claims came up, and people had just lost their ideological moorings. There's a great attraction in being able to say, 'We have great ancestors, we go back millennia and we can claim these special places for ourselves.' In some places it's relatively benign; in others it can be malignant (Kohl in Woodard 2009: 3)

Andras Riedlmayer, a Balkan specialist at Harvard University adds to say:

I think the pyramids are symptomatic of a traumatized society that is still trying to recover from a truly horrendous experience. You have many people desperate for self-affirmation and in need of money (Riedlmayer in Woodard 2009: 3).

Lately, scholars have shown increasing interest in the question how it is possible for Osmanagic and the pyramid story to maintain its popularity and credibility, and how there

seems to be no end to the Foundation and its project despite conflicting evidence and scientific opposition (Pruitt, Carver, Holtof and Hilton 2011).

1.4 Sentiments, suspicions and heated discussions: The volunteers take action

When I participated in a 2-week shift of the Foundation's volunteer programme, I was surprised at the varied backgrounds of the volunteers with regards to country of origin, age and occupation. Despite the variety in background of the group of about 40 volunteers, there was a strong sense of community. Already before the individuals introduced themselves and their interests in a meeting belonging to the programme, volunteers were vividly engaging in conversations about interests that most of them, regardless of age and background, had in common. Conversations, such as those on ancient alternative history, energy bodies, conspiracy and collective human awakening and ascension, often lasted till late at night with a couple of beers at the bar of the motel, in which the volunteers were staying and the Foundation operated. Some would join each other in yogic exercises in the mornings before work and group meditation in the evening at sites in the Visoko valley considered to be special. There was a strong sense of purpose and belonging that the volunteers felt about the project and its aims to change written history and the world, but especially about having met each other.

However, the attitudes towards Osmanagic and the Foundation did not remain so unanimously supportive for very long. Some of the volunteers had an education in archaeology, anthropology or geology, and from the start recognized the lack in methodology and solid evidence in Osmanagic's project. Many saw where the criticism of the scientific community might be founded. As days passed, more volunteers would express their concerns. At evening meetings, the volunteers working at different sites would complain about the lack of equipment which was poor or they often had to buy themselves, lack of leadership and professional expertise, no way to store and handle archaeological artefacts (such as lots of ceramics), not knowing what to do and the dangers of working in the tunnels. Many felt that the Foundation was ignoring them without a management plan and transparent intentions and information. Some, myself included, were starting to get suspicious of whether Osmanagic was truly committed to do real research, or exploiting the volunteers for his own elusive ends, as expressed by warnings of established scientists.

At the point at which me and some other volunteers started hearing insider stories from volunteers or employees who had worked with the Foundation for a longer period of time and established their own local connections. Some of these stories made our suspicions of Osmanagic peak at a conspiratorial level. Stories included deals between Osmanagic and corporations, including a major Russian arms dealer, to buy land potentially containing

ancient sites or ruins in the Visoko area. Suspicions were also raised by the fact that Osmanagic focussed all his interest and resources on the tunnels (which he was modifying and reinforcing beyond archaeological necessities), instead of the surface sites: Osmanagic comes from a very influential and wealthy Bosnian mining family and we were suspicious about the possible hidden economic interests that he had in the hills and sites in Visoko. Were his interests in the hill purely archaeological? What was going on? And why did EUFOR have to send 5000 troops to Visoko immediately after the announcement of the pyramid discovery? Were they actively monitoring the project, and if they did, why was this the case?³. Some volunteers also suspected Osmanagic of having ties with the local mafia which was strong in Visoko and also said to be funding of the project. These stories, rumours and suspicions were upsetting and confusing enough for many to lose trust in Osmanagic completely.

With the strong motivation and sense of community still intact amongst the volunteers, the idea of a Volunteers Association, looking after the rights and well-being of the volunteers, was put in motion. A survey was filled in by every volunteer and the results, as well as a charter for the foundation of the Visoko Archaeological Association of Volunteers was handed to Osmanagic on stage at the Hidden History Conference. The charter and the survey results pleaded for better food, equipment and lodgement, professional guidance and research methods and transparency from the Foundation. The charter and the foundation of a volunteers association was later turned down by the Foundation. The volunteer programme of 2013 was promised to feature a large professional team to guide the volunteers and better food. Consequently there would be higher costs for the volunteers, who pay a daily price for participating.

There was a considerable group (me included), however, who was still interested in the archaeology of the Visoko valley and wanted to continue contributing. However, we couldn't see ourselves working for the Foundation again. In the fall of 2012 about 10 volunteers came together to look into the possibilities of continuing volunteer work either independently from, or in collaboration with, the Foundation. In the end it was decided that an already existing organisation Archetypes International Research (AIR), founded by ex-volunteers, would form the basis of this project independently but in good terms with the Foundation.

³ Pruitt mentions a NATO (possibly EUFOR affiliated) officer who believed that the Bosniak Muslims want their own Medjugorje, a Croat Catholic site attracting lots of tourists (Pruitt 2009: 62). In a country where ethnic (and therefore religious) divides have been traumatic, a quick precautionary deployment of troops might be deemed necessary to prevent feared ethnic or religious clashes. Moreover, surveillance operations conducted in peacekeeping operations on high-profile civilian events is not uncommon. My own assessment, having been trained by former EUFOR operatives myself during my military service, is that conducting a relatively standard surveillance operation on international event presents a prime opportunity for keeping soldiers vigilant and trained in an area where little violence has occurred in the recent decade.

Having already started working on a medieval fort in the Visoko area in collaboration with the Museum of Visoko, AIR currently has contacts and collaboration with 7 universities in Europe such as those in Sarajevo, Venice and Leiden. The idea is that AIR would opt for applicants studying in relevant fields, such as archaeology, history, anthropology and geology. AIR will proceed performing a landscape survey project and record surface archaeology of sites in the Visoko area in the summer of 2013. This was already recommended as a first thing to do in the Visoko valley in 2006 by American scholars, since no such archaeological catalogue exists of the area (Kampschorr 2006: 27).

1.5 Conclusion

In this chapter I have tried to show that people take up three different positions when it comes down to legitimising their particular understanding of the pyramid project. All three positions claim to be scientific, yet they all do so through different arguments. Also, all three narratives legitimise their ways of relating to the pyramid project by means of science.

Semir Osmanagic's intentions, as he publicly expresses them, are about seeking the truth about ancient human history beyond the false story he says we are told by mainstream institutions. He sees himself as a scientist and researcher who looks beyond the scattered elitist disciplines of established science. His critics, mostly established scholars and scientists themselves, depict Osmanagic as unqualified and consider his project as amateurishly run. They think of it as a classic pseudo-archaeological hoax which uses scientific rhetoric and pre-formulated conclusions and results to play with the wishes of ordinary people. The volunteers are enthusiastic about being able to participate in an archaeological research project without having to have the qualifications that would be required by many excavations led by scientific institutions. Also Osmanagic's spiritual vision does much to attract volunteers. However, they see for themselves that without relevant professional guidance, proper management and equipment, their cause to contribute in discovering the ancient past is undermined. Many volunteers choose to continue independently from the Foundation, in collaboration with scientific institutions.

All three narratives legitimise their beliefs, ways of knowledge and the choices and actions that result from them in relation to science. Whether it is search for scientific truth, the necessary scientific qualifications or will to participate in a working scientific endeavour, science plays an essential role in the way people position themselves vis-à-vis the pyramid project and one another. Science plays a role of authority, a role which seems to have a different meaning for the three parties to which the narratives above belong to.

Chapter 2

Public engagement and the authority of science

In this chapter I will look more closely at the debate between established scientists and supporters of the Foundation regarding the nature of the Visoko valley. I will do this by comparing the case with cross-disciplinary literature dealing with science-public relations and dialogue. The term 'public' is an ambiguous one, but it is often used in archaeological, sociological and STS literature. One of the ways in which the term is used in this literature is to describe alleged non-scientific and non-professional people, who engage in some kind of a relationship with science. The relationship between science and the public manifests in many ways, such as direct participation in a scientific project, through direct or indirect discussion or debate with institutional scientists in the media or internet. In the Bosnian case, the 'public' as used by established scientists in their articles or by me, generally includes members of the Bosnian public as well as members of the international public engaged with the pyramid project through participation or support.

2.1 Public participation in scientific projects

Apart from one over-worked credentialed archaeologist employed by the Foundation, the volunteer programme was run and managed by members of a mostly international public who, with the exception of a few students or amateurs, had no professional background. As a new shift of fresh volunteers came in, the lead archaeologist would sort them into teams with a team leader who often had no archaeological background. In the mornings, teams would gather and, if needed, buy tools from the local tool shop on the way to their dig site. One team of less able bodied volunteers would stay to clean and sort artefacts such as pottery or microliths that were found by the dig teams. In the evenings a meeting would be held in which experiences, thoughts and ideas were shared. During discussions and individual initiatives, volunteers would actively participate in the interpretation processes of the finds. Examples of this were using comparative material on the internet to determine the age of a roman coin found on a dig site or identifying the patterns on a piece of pottery, and thus the cultural origin of it. As such, there was much room for volunteer participation and initiative, and very little professional oversight on the practicalities of the pyramid project. While volunteers recognised the lack of professional supervision, they enjoyed the freedom to experiment and discover. However, the explicit lack of methodology would hurt the eyes of many established scientists seeing the volunteers in action (Bohannon 2006).

Because of the employment of volunteers, the pyramid project would be called a "community archaeology" or "public archaeology" project, or a project that is initiated and/or

conducted largely by untrained members of the public (Merriman 2004: 3, 13). In wider cross-disciplinary literature such projects are more generally referred to as “citizen science”, or “ programs in which a network of volunteers, many of whom have little or no specific scientific training, perform or manage research-related tasks, such as observation, measurement, or computation” (Schnoor 2007: 5923). While the term “citizen science” is said first to have been used in the 1990’s by ornithologist and researcher Rick Bonney, amateur and volunteer based projects are no new phenomenon. Already in the 1840’s the Smithsonian Institution used over 600 public volunteers for weather monitoring. In the history of ornithology the National Audubon Society’s Christmas bird count is over 110 years old (Hillary 2013). The roots of archaeology lie almost completely in volunteer and amateur work, with most projects having been run and initiated by and for the public before the professionalization of archaeology in recent decades (Farley 2003: 1, Merriman 2004: 18).

Whereas the objection against the pyramid project may suggest otherwise, institutional scientists don’t consider citizen science and volunteer-based projects to be counter-productive by default. Jason Schnoor, editor of the *Environmental Science & Technology* journal, sees many possibilities in citizen science programmes, as they allow observations and projects on a large scale that would otherwise not be practicable, while also educating the public.

The practice of citizen science is often embraced in the context of environmental sciences (Schnoor 2007, Golland and Reid 2012, Ottinger 2009, Parsons 2011). This includes ecological rehabilitation monitoring (Golland and Reid 2012), pollution monitoring (Ottinger 2009) and bird counting (Hillary 2013). The great potentials of public participation are also recognized amongst archaeologists. Community archaeology is seen as allowing the public to be educated, providing the manpower needed for excavations, enriching the discipline with multiple interpretations of the past and making it worldwide as communities initiate their own archaeological projects (Faulkner 2003: 1, Merriman 2004: 3, Marshall 2002: 211).

While citizen science projects are not debunked by established science per se and while volunteers can be trained to obtain reliable information, the questionable quality of data gathered by volunteers still discourage many scientists to trust citizen science programmes (Schnoor 2007: 5923, Golland and Reid 2012: 969, 970, Ottinger 2009: 248, Parsons 2011: 37). As with citizen science involved in environmental projects, concerns about data quality is also relevant for archaeology, as public interpretations of archaeological finds can be susceptible to misinformed or ideological views (Merriman 2004: 7).

2.2 The participating public in the eyes of professionals

There is extreme public interest in archaeology. This manifests in many forms such as wishes to participate in excavations, public participation in archaeological discussions on the internet and a wide range of literature with alternative interpretations of archaeological finds (Merriman 2004, Schadla-Hall 2004: 255-256). Established archaeologists are under pressure to match the popularity and amount of public and alternative interpretations of archaeological finds and the past. Nick Merriman, editor of the volume *Public Archaeology* (2004) describes the challenge that established archaeological views face as follows:

Even if everyone were clear as to the established archaeological interpretation of Stonehenge or the Pyramids, this would not necessarily prevent many people from believing in spacemen and power fields, simply because these are more exciting explanations than the prosaic arguments put forward by archaeologists (Merriman 1991: 116 in Merriman 2004: 9).

The popularity of alternative archaeological interpretations has led some professional archaeologists to call for strict distinctions between 'good' and 'bad' archaeology and for taking clear positions in public discussion to assert their scientific authority (Merriman 2004: 7). Using archaeological internet forums on Çatalhöyük, a large and famous neolithic site in Turkey, as an example, Carol McDavid calls upon established archaeologists to "make [their] own truth claims loudly and forcefully *within* [the context of public conversations on science]" (McDavid 2004: 173). According to Merriman, the dominant of the public amongst archaeologists, also referred to as the 'deficit-model', is characterised by the assumption that the public is in need of education so that proper methods and professionalism would be appreciated. Alternative views on the other hand, would be discouraged. Public participation in archaeology is approved, whether it is excavation or the interpretation of data, but only under strict guidelines of professional practice (Merriman 2004: 6).

Merriman points out that this perspective can affect the way in which the public views professional archaeologists. The "implicit casting of the public as deficient" and ignorant (McDonald 2002: 49 in Merriman 2004: 5) is an attitude often perceived by non-professional interested spectators, visitors and amateurs who feel that the archaeology that addresses them is too "academic", "snobbish", "reserved" and "elitist" (Farley 2003: 3.1). This is made clear in a study by the Council of British Archaeology on public participation. In the recent decades, a strong professionalization of archaeology has taken place, as graduates and the commercial sector have taken over the field that previously was dominated by amateurs and public effort. This has not reduced the interest of the general public. Amateurs, hobbyists and interested newcomers who are willing to participate in archaeological projects are often faced

by high barriers to entry, such as required qualification, too little places for participants or a negative attitude of professionals towards non-professionals (Farley 2003: 1, 3.1). One of the barriers to successful cooperation and relations between archaeologists and the public, which was the aim of the study, was described as follows:

There was a strong perception [amongst public scientists and the visiting public] that archaeologists... are often reluctant or unwilling to engage with either the general public as a whole or with those who have a strong interest and much experience in local archaeology. Some spoke of professional elitism and a closed shop; there was a feeling that archaeology is “done by professionals for professionals” and that professionals are no longer willing to admit or impart a sense of excitement (Farley 2003: 3.1).

Public criticism of professional scientists attitudes towards non-professionals is not limited to an archaeological context. Reactions to scientific “elitism” are considered in a larger frame in sociology and science and technology studies. Alan Irwin’s book *Citizen Science* (1995) is based on science-public dialogue in the context of environmental issues of great public interest, such as climate change, biodiversity and use of toxic herbicides. He argues that public criticism of established science, such as in the CBA report, only enforces the ‘deficit-model’ of the public amongst scientists:

At present, public groups are frequently portrayed as ignorant or irrational in the face of scientific progress. External criticism of science and scientific institutions is taken to imply a deficit of public understanding rather than a need of scientific reflection and self-appraisal (Irwin 1995: 4).

Irwin’s statement reveals what I see as a vicious cycle. Public criticism of institutional science, including the way in which established scientists address the public, is interpreted as resulting from a lack of public understanding of science. The implicit attitude towards the public, which depicts it as ignorant or irrational, again aggravates the public.

Irwin’s concise statement does not necessarily imply that this vicious cycle in science-public dialogue is applicable in all cases. Neither does Irwin imply that every established scientist holds a ‘science-centred’ worldview that depicts the public as ignorant (Irwin 1995: 14). The fact that the CBA has taken public criticism of the way archaeologists engage the public seriously proves that scientific institutions value science-public relations and the possibilities that public participation brings. However, the ‘vicious-circle’ described above does become visible in the science-public dialogue which emerged in Bosnia around the pyramid case.

2.3 Public response to established scientists in the wake of the pyramid sensation

Much of the criticism of the pyramid project by scientific journalists was, fitting the description of the deficit-model, directed towards the alleged ignorance of the public. They speak of the Bosnian public as one that lets itself fall under the spell of Osmanagic's absurd theories, despite the hardest efforts of the scientific community to educate them for the better (Bohannon 2006: 1718, Pruitt: 59, 66, Woodard 2009: 3). Harding, director of the EAA commented on the pro-pyramid public as follows:

It is striking how this story has come to be regarded as genuine. Most people, including many journalists, seem to want to believe it, and treat the objections to it as motivated by jealousy or ignorance... people want to believe them. (...) fantastical theories come to be accepted as genuine by some segments of the population – including educated people who might otherwise be sceptical if it was something within their own field of knowledge (Harding 2006: 2).

Scientific objections of the pyramid programme and scientific appeals to political authorities to stop the excavations have been taken harshly by the Bosnian public. Some critical scientists (both local and international) received threats from members of the public by email or telephone calling them enemies of Bosnia (Bohannon 2006, Woodard 2009, Kampschror 2006, Harding 2006, 2007). This is the reason why most scientific accounts attribute the irrationality of the Bosnian public to its bloody past:

(...) the primary function [of nationalistic archaeology] is to bolster the pride and morale of nations or ethnic groups. It is probably strongest amongst peoples who feel politically threatened, insecure or deprived of their collective rights by more powerful nations (Trigger 1984: 360 in Pruitt 2009: 61)

For many established scientists calling names might seem justified when Bosnian nationalists took the extreme line in threatening scientists. However, these extreme cases of public reaction towards scientific criticism overshadowed the more tempered views of the public, hardly in the articles of scientific journals (Bohannon 2006, Rose 2006, Kampschror 2006, Woodard 2009). In a more extensive academic article, Pruitt includes voices of the Bosnian public that offer a different angle to the issue:

Members of the public who listen to supportive media often claim that Osmanagic and the Pyramid Foundation sound like they are arguing for rational, scientific archaeological ideas and evidence, and that arguments made by professional archaeologists and opponents are not always clear or simple, or they sound mocking and pompous (Pruitt 2009: 68).

Likewise the volunteers of the pyramid project who, like supporters amongst the public, are called senile or juvenile 'pyramidiots' (a term already coined in the 20th century) by scientists, see science as cold and militaristic, already condemning the project without coming to see for themselves (Pruitt 2009: 61). Pruitt's description of volunteer sentiments is accurate in describing my perception of how many volunteers, being conscious of the scientific discourse about them, felt. The feeling of premature abandonment by established science, on the basis of harsh judgement of the project and the pyramid hypothesis as pseudo-archaeological and irrational if not abusive, made Osmanagic's apparent openness towards the public look (initially) like a hero in the eyes of many.

2.4 Science as a value-free practice

The views of both the international volunteers and the interested Bosnian public, in which established scientists are seen as cold and pompous are comparable to those in the CBA report. In the Bosnian case, however, extreme threats by Bosnian nationalists quickly justified an escalation in the tone of established scientists in their writings of the pro-pyramid public. The consequences this might have the popularity of the pyramid project, which aims to include and empower the people, seem only to have been acknowledged by Pruitt (2009: 61, 68). Scholars remain baffled as their arguments do not seem to work, and the pyramid-project continues to flourish year after year. The gap between established scientists and the public regarding the nature of Visocica hill seems as wide as ever, and Pruitt (2009: 69-70) would agree with Irwin's argument that "accusations of 'irrationality' seem to compound rather than resolve the problems" (Irwin: 1995: 32).

In a mediatized discussion, established scientists criticised the public and their beliefs and the pyramid project, which according to critical scholars should never be supported. This served only to 'break the heart' of many volunteers and members of the public who expected non-judgemental insight of scientific institutions. The volunteers disappointment as well as my own surprise of the way institutional scientists refused to fully investigate Visocica hill and engage in cooperation with the Foundation from the start, reflect expectations of science being 'value-free' and ready to serve the public. The pyramid project was supported not only by members of the public, but also openly by Bosnian politicians and the government, who according to Osmanagic, provided 10% of his budget (Bohannon 2006: 1720). Scholars objected president Sulejman Tihic's motion to apply for a UNESCO status for the Visocica hill and related sites (Woodard 2009: 4). Scientific criticism of the Bosnian government's support and blocking motions to acquire a UNESCO status for Visocica hill showed how established scientists were not only involved in a mediatised debate, but stepping in a discussion of government policy. Focussing his studies on a more political context, STS scholar Mark

Brown points out in his book *Science in Democracy* (2009) that the increasing politicisation of science and the use of scientific argumentation in politics (which in most cases is mediated) makes it hard for the public to see science as 'value-free', a rationale which science retains. Hereby science loses its authority towards the public, as the authority of science is built upon the idea of it being objective (Brown 2009). While entertaining the idea of being 'value-free', Irwin argues that the modernist/enlightenment scientific rationale also prevents scientists from self-reflecting in a confrontation with the public (Irwin 1995: 4, 14, 40). According to Irwin, scientists working for established institutions are likely to meet external criticism like that from the public,

(...) with incomprehension and (very often) allegations of public hysteria and media irresponsibility. The powerful image of science as 'value-free' serves, of course, to reinforce such notions. Such a process can, in turn, exacerbate the problems of communication between scientists and the wider public – encouraging further the idea that the public are irrational but also fostering public doubts about the value of scientific assessments and damaging the credibility of scientific institutions (Irwin 1995: 31).

It is apparent from the Bosnian case that in an international mediated discussion, where established scientists have reacted strongly on the pyramid project and its supporters both in the public as well as the Bosnian government and its policy, established scientists have struggled to assert their authority as representatives of 'value-free' science.

2.5 Conclusion

The aim of this chapter has been to highlight a general trend in science-public dialogue and the way established scientists view the public. The public is eager to participate in scientific endeavours either by participating in a project itself, interpreting available data or through support in all its forms. As discussed by STS and archaeological scholars, in archaeology as well as other in fields such as environmental sciences, institutional scientists are sceptical about the competence of non-scientific participants. They feel that this misunderstanding of science should strongly be addressed. STS scholars, as well as members of the public, agree that there is a general attitude amongst established scientists in which the public is seen as deficient and irrational. According to Irwin (1995) and Brown (2009), the science-centred rationale, which holds itself as 'value-free' and the public as 'irrational', often leads to issues with the public in mediated debates. In the Bosnian case, it is apparent that the tone used by established scientists to criticise the pyramid project has severed public trust of scientific institutions (Pruitt 2009: 68).

The aim of this thesis is to shed light on the stalemated situation, in which established scientists find themselves facing the supporters of the pyramid project. Established archaeologists explain their failure to convince the public and popularity of the pyramid project as a result of local Bosnian socio-political struggles. Scholars engaged in the Bosnian case come to the conclusion that the Bosnian people truly want the pyramid to exist, believing that it will provide a better future in times of socio-political and economic struggle (Bohannon 2006, Woodard 2009, Pruitt 2009). Connecting this case to a wider base of cross-disciplinary literature, has helped to expand on the limited argument. The Bosnian case, and public response to scientific criticism, can be situated in a wider context of problems in science-public relations, of which the public and its situation alone cannot be accused. As this chapter reveals, the attitude and tone of established scientists towards the public does much to sever the willingness of the public to listen to the scientists 'rational argumentation' (Pruitt 2009: 68).

Chapter Three

New Age Science and Pseudo-archaeology

In the second chapter I highlighted a general understanding amongst archaeologists when it comes to considering public participation and engagement in archaeology and archaeological projects. The public is seen to be in need of strict professional guidelines and education, and non-scientific alternative interpretations are discouraged. When referring to alternative interpretations or 'alternative archaeology', scholars and archaeologists such as Schadla-Hall (2004), McDavid (2004) and Merriman (2004) generally point at pseudo-archaeology.

Pseudo-archaeology is a notion, and a problem, much discussed by archaeologists. Much in the way that Bourdieu describes the developmental process of any field (1993), what is considered to be legitimate archaeology as a field is subject to change through time as archaeological theories once held in high regard get disproved through time. Nowadays pseudo-archaeology is strongly associated with having a non-academic target audience, promoting theories often discarded by 'mainstream' archaeology (Schadla-Hall 2004: 256). Principal themes, sometimes based on outdated theories, include the belief in lost super-civilisations such as Atlantis, as the starting point for the great monumental civilisations in history, such as the Egyptians or the Maya. Authors generally associated with pseudo-archaeology by professional archaeologists such as Erick von Däniken and Graham Hancock, claim that the ancients possessed knowledge and power now lost to our current civilisation and that their monuments had potent energetic properties with important stellar alignments. This approach to interpreting the past is affiliated with religious beliefs and groups such as Druids, UFO-seekers, fertility and Goddess cults that often show great interest in sites associated with special energies and ancient super-civilisations (Schadla-Hall 2004: 256-258, Fagan 2006: xvii). According to Schadla-Hall, archaeology has been used already before the 18th century to support such myths, often with only a veneer of academic respectability and methodology (Schadla-Hall 2004: 256).

The general view amongst archaeologists is that pseudo-archaeology is to be confronted and not passively ignored (Fagan 2006: xviii, McDavid 2004: 177, Schadla-Hall 2004: 255). Quoting Stoczkowski, Pruitt (2009), argues that effectively resisting pseudo-archaeology will be difficult if the complex socio-political background of its support is not taken into account:

What is at stake is rather our capacity to grasp the cultural dimension of pseudoscience. In fact, once we have shown that it is inferior to academic science (which is a truism for most of the scientists and their public), we still have done nothing to understand pseudoscience as a social phenomenon” (Stoczkowski 2007 in Pruitt 2009: 59).

The question as to why pseudo-archaeological literature remains so popular in an age of reason is frequently asked by archaeologists (Fagan 2006). While scholars studying the Bosnian case make a point in looking at pseudo-science as a socio-cultural phenomenon, they limit the socio-cultural context to a local Bosnian context. This context, however, extends beyond a local as an important portion of the support for the pyramid project comes from abroad. Additionally, as argued in the previous chapter, problems in science-public dialogue which arguably benefit alternative scientific rationales such as that of Osmanagic, are not specific to a Bosnian socio-political context.

This chapter focusses on science-religion dialogue. Looking at the religious aspects of pseudo-archaeology opens new alleys to interpreting the popularity behind pseudo-archaeology. It allows the comparison of the Bosnian case with pools of scientific literature outside that of archaeology, such as historically orientated Wouter Hanegraaff and anthropologically orientated David Hess in which pseudo-science is seen as a part of a wider science-religion dialogue.

3.1 New Age as an international discourse of the pyramid project

As shown in the first chapter, a variety of esoteric and arguably New Age related topics dominated the conversations between volunteers from different (mostly Western) nationalities. Established scientists argue that the mostly Muslim Bosnian pro-pyramid public supports the project more for nationalistic and ethnic grandeur as well the economic benefits that a successful and recognised pyramid project would bring with it (Bohannon 2006, Kampschror 2006, Woodard 2009, Pruitt 2009). To which extent New Age and related pseudo-archaeological discourses are known and discussed amongst the Bosnian public and scholars remains a question. Only Vuk Bacanovic, one of Osmanagic’s only critics in the Sarajevo press, has described Osmanagic’s theories as “a religion based on corrupt New Age ideology” (Woodard 2009: 2). Nevertheless it is clear that Osmanagic’s international support base existed largely amongst individuals with New Age-related interests, just as is a concern amongst the international scientific community.

To establish the nature of the dominating topics, beliefs and practices shared amongst the international pro-pyramid community and volunteers as New Age requires a clarification of what is meant by ‘New Age’. New Age scholars from a range of disciplines

speak of it as a spiritual, cultic and countercultural milieu, movement or discourse in which there is no pre-set organisation or structure (Zandbergen 2011: 6, Hanegraaff 1996: 1). Self-spirituality and individual choices in how beliefs are practiced and communicated stand central and New Age is sometimes called a do-it-yourself and pick and mix religion (Baerveldt and Hamilton in Aupers and Houtman 2007: 201).

The milieu of volunteers varied greatly in age, expression and background but connected in a vast variety of topics known by almost each individual. These ranged from Western esoteric and mystic topics to Eastern yogic and meditation and on to conspiratorial criticism of society. Often volunteers would speak of the relationships they formed in Visoko as being 'meant-to be'. Some proclaimed to have found their soul-mates. Others said they knew many of their re-found friends from past lives from when the pyramid was built. Evening hours often featured small groups spontaneously going to one of the nearby sites and meditate. The top of Visocica hill, said to have a huge energy beam shooting into space, was a particular favourite. Others wanted to keep power-point presentations about subjects like ley-lines, UFO's or (other) sacred sites. Alternatively, some would opt for going to the bar, ordering a beer and discussing the possible involvement of Freemasonry or the Illuminati in the alleged mainstream boycotting of the pyramid project. In the morning, volunteers would take initiative in practicing yoga or meditation in groups before starting the day's work. All in all, free time activities were characterised by spontaneous initiatives in which individuals could share practices and beliefs with other like-minded people. These practices were usually carried out in small groups at the same time, and individuals could freely choose when, what and with whom they would participate if at all. Such a milieu was also celebrated by Osmanagic, who would at times participate in related spiritual conversations with volunteers. He would himself organise guided tours for tourists to the sites which according to him have healing properties, and participate in group meditations with them. Many volunteers found meaning in being part of uncovering the pyramid, which Osmanagic believed would help bring humanity into a 'new age' of light.

The connection between the volunteers and the interest towards the pyramid-project can arguably be designated as New Age related. The varied spiritual activities which emerged in a spontaneous and unorganised fashion, offered a perfect milieu for an individual to freely choose his/her preferred spiritual activity, as well as their frequency and depth of participation. Such a scene fits well within the definition of a counter-cultural cultic milieu and pick-and-mix religion, where self-spirituality and choice stand central. For analytical purposes, using the term 'New Age' opens a door to the literature of New Age scholars such as Wouter Haanegraaff and David Hess, which again sheds light onto how New Age stands in relation to science and the established scientific order.

3.2 The pyramid project as New Age science

One of the notable characteristics of New Age thinking is its high regard for modern science. This may seem surprising at first sight because New Agers also tend to distrust and reject academic rationalism; but, in fact, the contradiction is only apparent (Hanegraaff 1996: 62).

Hanegraaff's comment describes well that which surprised me when I first joined the volunteers. While mainstream science was rejected in Osmanagic's rationale, he argued for science in the middle of a New Age milieu. As described in the first chapter, the Foundation has organised its own conferences to which it invited researchers and scientists, many of them having a degree or holding posts within established academic institutions, to hold presentations that supported or otherwise contributed to Osmanagic's idea of Visocica hill being an ancient man-made structure. In the conference of 2012, Osmanagic made an interesting comment while explaining why modern archaeologists and Egyptologists could not help in answering important questions about the pyramids, a reason why he had invited scientists from many other disciplines to his conference: "In the distant past, knowledge was not divided into so many different compartments that we call today scientific discipline" (Osmanagic 2012). According to Hanegraaff, the "old" or traditional science associated with alienating academic establishments and the "new" science in which a holistic perspective is sought, are radical opposites in the New Age. The interest of the New Age-minded pyramid project thus clearly lies in modern science serving holistic knowledge, and not the mainstream established science which Osmanagic sees as an obstacle for the holistic perspective he seeks.

In its search for holism and purpose in a new scientific context (Osmanagic 2012), Osmanagic's scientific endeavours in the form of the pyramid project and the 'scientific' conferences hosted by him, can be seen as an example of what Hanegraaff calls 'New Age Science'. New Age Science is often called 'fringe science' or pseudo-science by critics. Similarly, defenders of this science, such as Osmanagic, like to see the new scientific paradigm that they practice as "leading edge science" (Hanegraaff 1996: 62). What defines New Age Science and also distinguishes it from traditional science is that its primary concern is to search and legitimise a worldview, instead of primarily searching for new scientific facts (Hanegraaff 1996: 64). Osmanagic has been criticised for pre-formulating results and interpreting data to fit his beliefs about ancient civilisations and pyramids (Pruitt 2009: 55). Hanegraaff shows that the religious interpretation of scientific findings by New Age Science authors is common. This characteristic of New Age Science serves to show how science is used to a particular holistic worldview.

Following the scholar Antoine Faivre, Hanegraaff points out that New Age Science is what Faivre calls a *Naturphilosophie*. A *philosophy of nature* seeks an intuitive but rigorous approach to data derived from observing reality. This makes New Age Science a religious, and not a secular philosophy (Hanegraaff 1996: 65). One amateur archaeologist currently employed by the Foundation advocated what he called “intuitive archaeology”, an idea which was embraced with open arms by other volunteers. A quote from the Volunteer Forum on Facebook beautifully captures how the “intuitive but rigorous” nature of this philosophy manifests in the beliefs of a volunteer:

I believe that personal spiritual and critical research together with global awareness awakening will soon crush the Thrones imposed on us and this is already happening (17th of January, MRV-Bosankse Piramide forum on Facebook).

Garrett Fagan, editor of the book *Archaeological Fantasies* (2006) mentions that as a part of his student’s curriculum in archaeology, pseudo-archaeological accounts were studied as examples of how archaeology should not be conducted Fagan (2006: xvii). Hanegraaff’s points out that criticising New Age Science for being bad science in secular terms is beside the point since New Age Science is religious by nature. Even if scientific theories embraced by New Age Science might be falsified by mainstream science, its defenders will be likely just to believe that future discoveries will put things right (Hanegraaff 1996: 66). Similar hopes of significant future discoveries fostered by Osmanagic are held on tightly by some enthusiastic volunteers who, despite also reading critical scientific articles on the Bosnian pyramids, keep returning to the project every year. The quote from the volunteer on the Facebook forum illustrates how the research project he participates in goes hand in hand with his spiritual seeking, and how all obstacles will be overcome in the future.

3.3 The Science - New Age science dialogue as a ‘social drama’

In his book *Esotericism and the Academy* (2012) Hanegraaff places the origins of both New Age Science, its roots in Western esotericism and its difficult relationship with the academic establishment in the Renaissance era. The search for holistic integration of ancient knowledge amongst Italian intellectuals, Hermetic, Kabbalistic and Platonic discourses which at first were common and accepted in the academy, were soon seen as heresy (Hanegraaff 2012: 148). In the enlightenment era where reason was the yardstick for truth, such studies were seen as stupid, foolish and irrational and left finally and completely outside of the academic sphere and left in the hands of amateur scholars (2012: 154). Hanegraaff argues that this caused a downward spiral in the quality of literature, and themes of ancient and intuitive knowledge were mostly featured in 19th century romanticist works of fiction (2012:

221-222). This is also the time where archaeology was amateur based, and where Schadla-Hall places the roots of pseudo-archaeology in its quest of verifying myths of ancient grandeur (2004: 256).

The process described by Hanegraaff in which esoteric discourses were left at the fringe if not kicked out of academic science could be called “boundary-work” by David Hess in his book *Science in the New Age* (1993). Much in the way that Bourdieu could describe science as a field of contestation, Hess uses Thomas Gieryn’s sociological concept to explain that ‘science’ is not a static object. Instead it is a product of constant change, ambiguity, dispute and search for legitimacy in society. Boundary-work should be situated in a cultural and historical context where scientists actively distinguish science from other discourses and domains, such as religious ones, that also engage in boundary-work towards orthodox science (Hess 1993: 145).

The recursive nature boundary-work in both directions could also be applied on a science-public level in addition to the science-religion level as described here. This forms according to Hess a meaningful cultural dialogue or, in Victor Turner’s terms, a “social drama” (Hess 1993: 146).

Turner’s work, as identified by Hess, is a useful tool in analysing the cultural dialogue and boundary-work between established science and Osmanagic’s New Age Science. In his work *Dramas, Fields, and Metaphors* (1974), Turner identifies four parts of in the sequence of a social drama. The first part is called the *breach*, which is characterised by an underlying tension between the conflicting parties of the drama. In the drama played out between the pyramid project and established scientists, this could be the existing tension between academic science and New Age Science that has long roots in history as pointed out by Hanegraaff. The second part, called the *crisis*, is a dramatic event, or series of events, in which the tension is brought to the surface. This could be for example be the media sensation following Osmanagic’s announcement of his alleged discovery and the harsh scientific criticism as a response to this announcement. In the third part of *redressive action* measures are taken to address and resolve the *crisis* as well as alleviate the tension. Here Osmanagic invites scholars from different disciplines to participate in his scientific conferences and join in his ‘new science’, which would free of elitism and antagonism. The choice by a group of ex-volunteers to form a new research project of the Visoko valley can also be seen as an attempt to address the situation. The fourth part is called *reintegration or schism*. The conflicting parties either resolve their issues and *reintegrate*, or alternatively both parties recognise the irreparability of the situation and the story ends in *schism*. Until now, no reintegration between the two conflicting parties has taken place and this has resulted in a stalemate, where both parties seem to have chosen separate ways.

3.4 Discussion and conclusion

In this chapter I have kept in mind questions posed by archaeologists such as Fagan:

Why did people find palpable nonsense so appealing? How could it be countered, since reasoned argument clearly had little effect on its followers? (Fagan 2006: xviii)

The tone itself, when inspected from the point of view of a cultural dialogue, could almost answer the question it dresses, as it is arguably harsh and arrogant towards the pseudoscientific other. Just as in the science-public dialogue in the previous chapter, the science-religion or science-New Age science as a cultural dialogue can be problematic as underlying tensions are involved. Hanegraaff shows how the attitude towards the alternative esoteric studies developed throughout the centuries, and continue strongly today especially amongst archaeologists. As Irwin points out that science's "science-centric" worldview keeps it from reflecting upon itself (Irwin 1995: 14) and even others, which is clear from the way in which science judges the religious other in scientific terms as 'bad science'. Both Hanegraaff and Hess, who aims to improve the dialogue between science and religious groups by adopting a cultural anthropological approach to his analysis, would agree that in this way of entering a dialogue, both the self and the other are misunderstood (Hanegraaff 1996: 66, Hess 1993: 148).

To conclude and take the first step of towards the final stage of this thesis, it can be noted that the struggle for scientific authority in the Visoko valley, when viewed in terms of a science-religion dialogue, is characterised by a social drama based on centuries of tension and antagonism.

Conclusion

This thesis started with the description of a conflict between established scientists and Osmanagic's Foundation over the truth about the archaeological nature of the Visoko valley and the validity of the pyramid project. In a mediatised debate, both parties used scientific argumentation to convince the wider public of their truth about the Visoko valley, and the other. To this date, this conflict has resulted in nothing more than a passive resistance maintained by established scientists, and a popular pyramid project that attempts to formulate a new science free from the alienating shackles of institutions.

As Bourdieu (1993) and Hess (1993) point out, science as a field is characterised by struggles of legitimation with factions both within and outside the field. In Visoko, the confusion caused by struggle is an obstacle for efficient research and an uncompromised overview of the archaeological nature of the Visoko valley. In trying to understand this struggle and the positions taken therein by the conflicting factions, this thesis has aimed to answer the question:

What is the nature of the struggle for scientific authority in the Visoko valley?

After spending time amongst a group of volunteers of the pyramid project that came to lose their trust both in Osmanagic's cause as well as mainstream science's conduct in addressing the public, the importance of viewing the situation as a dialogue of authority under challenge became clear to me. Two aspects that are important to recognise about the pyramid project have been the analytical focus of the thesis. Firstly, it is a project which involves a highly engaged public both as its supporters and as volunteers as its backbone. Second, Osmanagic's beliefs about the pyramid, as well as discussion and activity topics creating rapport between volunteers fall under the umbrella of New Age. These aspects open access to literature focussing on science-public relations on one hand and science-New Age relations on the other. Like this, comparable cases and situations as well as cross-disciplinary theory can be considered when analysing the different narratives and dialogue surrounding the Bosnian pyramids.

Archaeologists engaged in the Bosnian case explain their failure to convince the Bosnian public of the pyramid project's futility by the hand of the socio-political and economic struggles in Bosnia. In such circumstances, scholars argue, the Bosnian public would rather hold on to the promise of a better future that the pyramid would provide according to Osmanagic, than listen to sound rational argumentation (Pruitt 2009, Woodard 2009). This explanation is limited as it excludes the pyramid project's important international support base and religious dimension. Furthermore, the established scientists, critical of both the

project and the supporting public, generally fail to consider their own role in the failure to assert their scientific authority.

When the struggle for authority is viewed as a mediatised dialogue between established science and a pyramid project with an important public and religious support base, important observations can be made about that struggle. Irwin (1995) and Brown (2009) point out that established science bears the burden of representing science as a 'value-free' practice. This enlightenment rationale, from which science retains much of its authority, was compromised when in a mediatised debate established scientists strongly positioned themselves against politicians and the public supporting the pyramid project. Accusing the supporters of 'pyramidiocy' and 'senility' only served to infuriate the public (Pruitt 2009: 68, 70).

Opposing institutional science and advocating a more open and public-friendly science, Osmanagic's rationale became appealing to both the Bosnian public (Pruitt 2009: 68) as well as a wider international public with New Age interests. Irwin points out that:

When scientists then find themselves in public *disagreement* (as appears such a regular feature of policy debates), the science-centred model struggles to maintain its credibility whilst more critical voices seize upon the apparent confusion in order to stress the limitations and uncertainties of scientific analysis (Irwin 1995: 31).

Criticising established science of its elitism, secrecy and not having the public's best interest in mind, has been an important part of Osmanagic's argumentation already before his alleged discovery of the Bosnian pyramids. Being part of creating a new, holistic scientific practice free from the limitations of established science, has been an important part the Foundation's programme. Such 'New Age science' is inherently religious in nature, and addressing it as 'bad science' will only cause misunderstandings in a dialogue that is carried out between institutional science and New Age (Hanegraaff 1996: 66, Hess 1993: 148).

In many ways, the dialogue between established scientists and the Foundation is one going back to the enlightenment age and beyond Hanegraaff (2012), between the institutional academy and alternative philosophies eventually left on the margins. Both sides have strong existing assumptions about each and contest the legitimacy of each other's ways of knowing, which in this case involves notions of what 'science' should be. The historical background of this struggle, also characterising many other struggles between established science and pseudo-science (Hanegraaff 1996, Fagan 2006, Schadla-Hall 2004), is therefore an important element when considering the nature of the conflict in Visoko. The struggle for scientific authority about the archaeological nature of Visoko valley can thus be seen as a manifestation of existing tensions between two factions which both use science in different ways to make truth claims about reality.

List of References

- Appelrouth, S. and L. D. Edles (2008) *Classical and Contemporary Sociological Theory* Thousand Oaks, California, Pine Forge Press.
- AUBiH (2013) *Center for Archaeology, American University in Bosnia and Herzegovina*, 24-4-2013, http://www.aubih.edu.ba/en/institute/center_for_archaeology.php.
- Aupers, S & D. Houtman (2006) 'Beyond the Spiritual Supermarket: The Social and Public Significance of New Age Spirituality' *Journal of Contemporary Religion* Vol. 21, 2: 201-222.
- Bohannon, J. (2006) 'Mad About Pyramids' *Science* Vol. 313: 1718-1720.
- Bosnianpyramid (2005) bosnianpyramid, 20-1-2013, www.bosnianpyramid.com.
- Bourdieu, P. (1993) *The Field of Cultural Production* New York, Columbia University Press.
- Brown, M. B. (2009) *Science in Democracy: Expertise, Institutions and Representation* Massachusetts, MIT Press.
- Fagan, G.G. (ed.) (2006) *Archaeological Fantasies* Oxon, Routledge.
- Farley, M. (2003) *Participating in the Past: The results of an investigation by a Council for British Archaeology Working Party*, 30-3-2013, <http://www.archaeologyuk.org/participation/>.
- Faulkner, N. (2003) *Archaeology from below: a socialist perspective*, 30-3-2013, http://www.academia.edu/1238812/Faulkner_N._2003._Archaeology_from_below
- Gollan, J., L. L. de Bruin, N. Reid & L. Wilkie (2012) 'Can Volunteers Collect Data that are Comparable to Professional Scientists? A Study of Variables Used in Monitoring the Outcomes of Ecosystem Rehabilitation' *Environmental Management* 50: 969-978.
- Hanegraaff, W. J. (1996) *New Age Religion and Western Culture: Esotericism in the Mirror of Secular Thought* Leiden, Brill.
- (2012) *Esotericism and the Academy: Rejected Knowledge in Western Culture* Cambridge, Cambridge University Press.
- Harding, A. (2006) 'That Bosnian Pyramid!' *The European Archaeologist* 25: 2-4.
- (2007) 'The great Bosnian pyramid scheme' *British Archaeology* online, Issue 92, January/February 2007, 13-2-2013, <http://www.archaeologyuk.org/ba/ba92/feat3.shtml>.
- Henson, D. (2003) *Public Participation in Archaeology*, 30-3-2013, http://www.academia.edu/1674787/Public_participation_in_archaeology
- Hess, D. J. (1993) *Science in the New Age: The Paranormal, Its Defenders and Debunkers, and American Culture* University of Wisconsin Press.
- Hillary, R. (2013) 'Data on Wings' *Scientific American* 308: 68-73.

- Holtorf C. and J. Hilton (2011) 'Learning about the past from the Bosnian pyramids?' *Archaeologica Publica: Online Journal of Public Archaeology* Vol. 2: 44-51.
- Irwin, A (1995) *Citizen Science: A Study of People, Expertise and Sustainable Development* London, Routledge.
- Irwin, A. and B. Wynne (eds.) (2012) *Misunderstanding Science?: The public reconstruction of science and technology* Wiltshire, Cambridge University Press.
- Kampschorr, B. (2006) 'Pyramid Scheme: Has a Houston contractor discovered the world's oldest pyramid in Bosnia?' *Archaeology*, July/August: 23-28.
- Marshall, Y. (2002) 'What is Community Archaeology?' *World Archaeology* Vol. 34, 2: 211-219.
- McDavid, C. (2004) 'Towards a More Democratic Archaeology?: The Internet and public archaeological practice' Merriman, N. (ed.) *Public Archaeology* London, Routledge: 159-187.
- Merriman, N. (ed.) (2004) *Public Archaeology* London, Routledge.
- Old Europe (2008) *33rd IGC Welcomes Scientific Evidence About 'The Bosnian Valley Of Pyramids'* 25-3-2013, <http://bpblognews.blogspot.fi/2008/07/33rd-igc-welcomes-scientific-evidence.html>.
- Osmanagic, S. (2004) *The World of the Maya* Svetlost, Sarajevo.
- (2006) 'Energijsko središće sveta?' [The energy center of the world] *Misteriji*, p.5, online: 20-11-2009, http://ww35.cleopatris.net/misteriji/leto_2006/jul06/2k6_07_jul_energijsko_sredisce_sveta/index.htm.
- (2008) *Pyramid in Bosnia – Semir Osmanagic* recording on Youtube, 23-1-2013, http://www.youtube.com/watch?v=oc_XnTyycDk,
- (2010) *Pyramids Around the World* Archaeological Park: Bosnian Pyramid of the Sun Foundation, Sarajevo.
- (2012) *Hidden History Conference 2012-The Bosnian Pyramids: The Purpose of the Bosnian Pyramids* recording on Youtube, 20-1-2013, <http://www.youtube.com/watch?v=KQB2Pn7gk-U&list=PLpmdbPdbxvQc-pBz6baBtRumwvLCKpCM>.
- Ottinger, G. (2010) 'Buckets of Resistance: Standards and the Effectiveness of Citizen Science' *Science Technology Human Values* 35: 244-270.
- Parsons, J. (2011) 'Easier citizen science is better' *Nature* Vol 471: 37.
- Pruitt, T. C. (2007) *Addressing Invented Heritage: The Case of the Bosnian Pyramids* Master's dissertation, Department of Archaeology, University of Cambridge.
- (2009) 'Contextualising Alternative Archaeology: Socio-Politics and Approaches' in *Archaeological Review from Cambridge* 24.1: 55-75.

- (2012) 'Pyramids, Performance and Pseudoscience in Visoko, Bosnia' *Archaeologica Publica: Online Journal of Public Archaeology* Vol. 2: 26-34.
- Rose, M (2006) 'The Bosnia-Atlantis Connection' *Archaeology* online, 8-6-2013, <http://archive.archaeology.org/online/features/osmanagic/>.
- SB Research Group (2012) *Conclusions of the conference "Hidden Histories" 2012 in Visoko*, 2-2-2013, <http://www.sbresearchgroup.eu/index.php/en/notizie-in-inglese/104-conclusion-of-the-conference-hidden-history-2012-in-visoko>.
- Schadla-Hall, T. (2004) 'The Comforts of Unreason: The importance and relevance of alternative archaeology' in Merriman, N. (ed.) *Public Archaeology* London, Routledge: 255-271.
- Schnoor, J. (2007) 'Citizen science' *Environmental Science & Technology*, September 1: 5923.
- Silvertown, J. (2009) 'A New Dawn for Citizen Science' *Trends in Ecology and Evolution* Vol. 29, 9: 467-470.
- Woodard, C. (2007) 'The Mystery of Bosnia's Ancient Pyramids' *SmithsonianMag*, online, 20-1-2013, <http://www.smithsonianmag.com/history-archaeology/The-Mystery-of-Bosnias-Ancient-Pyramids.html#ixzz2MUFFZCJO>.
- Zandbergen, D. (2011) *New Edge: Technology and Spirituality in the San Francisco Bay Area* Leiden, F&N Bookservice.