Mícheál Mac an Airchinnigh (Department of Computer Science, Trinity College Dublin, Ireland)

PHYSICALITY OF SOUL, ФИЗИКА НА ДУША, FISIC AN ANAMA

Abstract: The idea of Physicality of Soul was born in South Eastern Europe in 2004. The very strangeness of the phrase, using old words in unusual combination, suggests something very new and of its time. The Bulgarian, Физика на Душата, tries to capture the sense of this idea from a local cultural perspective. At the other extreme Western Region of Europe, Fisic an Anama, translates the Bulgarian. Physicality of Soul speaks of the spirit of the Digital re-Discovery of Culture made alive in the playful person, (s)he who is at play in the game of life. The World-Wide Web provides the modern cultural medium by which one begins to know the Other. Such knowledge in becoming is only fully realized in and by the body. This is Physicality of Soul. Dancing typifies Physicality of Soul. So does play-acting and singing and running. There is play to be found everywhere. How can such playing be conjoined with the digital world? How can the digital world be humanized? This paper explores the possible.

Key words: blog, digifoto, edutainment, games, google, ontology, Физика на Душата, physicality of soul, playing, world-wide web

1. Practical Sense

In the early part of... the 1970's I organized a cycling tour for young students (aged approximately 16)... to Germany, a country which I had not yet visited. The cyclists were to stay in Judendherberge (Youth Hostels), a different one each night. The routes had to be planned and timed, taking into account departure from and return to Ireland. At that time... one needed detailed maps (suitable for cyclists)... a list of Jugendherberge, a telephone, and a practical knowledge of the German language. All these things were acquired and put to good and successful use... I remembered stopping one day in a small German town along the Rhein, and experiencing my first taste of a typical Turkish sweet pastry at lunchtime. Also at the same time I gave an interview in my best (broken) German to the local newspaper, a copy of which (together with photograph) was sent to me later in Ireland. This typifies for me today, in some way, what it means for **physicality of soul**. Specifically I mean this: through the tools of map, e-communication (telephone) and language (German) I had set up a "discovery of culture" for myself and my students. But the actual experience of the culture did not take place until I and all the others were physically present in place. Then the soulanticipation was physically realized [10].

hysicality of Soul may be considered to be a development, an elaboration, of the idea of the Practical Sense of Philosophizing which was explored in [11]. To philosophize is to be human. All humans do it. The way of doing it, of philosophizing, differs from human to human and varies over age (time) and culture (space). The meaning of "practical sense" (an English translation of the French *Sens*

Pratique [1]) was to be conveyed by the way in which every human acquired the Practical Sense of Space (through the developing body from seed to maturity). One might speak therefore of the "human being in becoming" to describe this process of acquiring, among other things, the Practical Sense of Space. Similarly, the developing process of reasoning, of philosophizing, grows with one.

Physicality of Soul is the opposite of "Spirituality of Body." I do not like the sound of the latter. Physicality of Soul is coined to express the needed bridging between the digital experience and the grounding in physicality, personal reality. Deliberate separation of the oneness expressed by Physicality of Soul into the Cartesian duality of body and soul, or body and mind, is desirable by militarists who wish the soldiers to kill at a distance without the personal reality of seeing the ones killed. Aerial bombardment is typical. The use of war games trains for such separation.

et us imagine that you see a photograph of some place on the WWW, such as the Mural (Figure 1). This particular image is Plate 61 in [25]. A comprehensive collection of such murals is accessible from [22]. It is an image that brings to mind much. Where is it? Who took the photograph? Why? What is the story it is meant to tell? *Let us imagine* that you subsequently go to visit the place. Only then does one have a complete Physicality of Soul experience.



Figure 1 Mural in Belfast, Northern Ireland UK

Now let us imagine the reverse. This is a photograph of some place to which you have already been. The photograph on the WWW brings back a memory. The Physicality of Soul experience is in the remembering. This aspect of Physicality of Soul has been captured well by Proust in his *Remembrance of Things Past* [36].

But a photograph can be older that one's lifetime. Here is one of the Church in Topčider (Figure 2) [29], Belgrade, Serbia and Montenegro.



Figure 2 Groman's Photo Album 1876–1878

"The church in Topčider, built as a residence, by order of Prince Milos in 1834. On the left side from the church, there is a big building with a second-floor porch. In the foreground, to the right, there are two soldiers and a horseman, dressed in a white fur-bordered tunic; he may be an escort of Princess Natalija." [23].

The know that what is shown is gone. Even the three men are gone. What sort of Physicality of Soul experience might there be in this particular case? I have visited Belgrade in 2004 just as the photographer did more than one hundred years ago. In some way the photograph and the visit bracket the city's history, the history of the people who lived and live there. The experience was mine.

Every photograph is to be read [2], just as every painting [5] and every tapestry and every book is to be read. In this photograph I am drawn to the figure on the right, the figure in black, smoking a pipe(?) and looking straight into the future though he could not have known it. Sometimes I think he looks just like me.

In the modern Digital re-Discovery of Culture (DrDC) the (digital) photograph plays a central role. Surely it is obvious how manuscripts are digitized? Even Groman's photograph is now digitized. Let us be deliberately and precisely careless with language and presume that any "modern" photograph is de facto a digital image unless otherwise indicated? No? Then let us be deliberate and precise and use the term digifoto which turns out to be widely used on the WWW. (The instrument which captures digifotos is the "digital camera", conveniently abbreviated to digicam.)

Anyone can tell their own story. Anyone can tell their own story by writing or singing or dancing or... Anyone can tell their own story by constructing (and manipulating) digifotos. We can expect to meet "anyone" through their stories on the WWW. A practical example of digifoto story telling was given during the KeyNote presentation of the author at Ohrid [19]. The story began with the image of a dead tree (Figure 3) used as a sort of marker for the Church of St. George, Kurbinovo, Prespa, Macedonia [6].

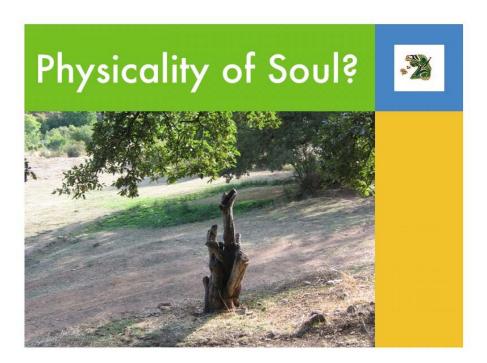


Figure 3 The Dead Tree comes alive in Prespa (digiFoto: Mac an Airchinnigh, 2005-09-13)

A careful selection of digifotos, suitably captioned, presented a visual argument for another view of physicality of soul. Let us consider the problem of encountering the Other through the World-Wide Web. The Mural above (Figure 1) tells many stories. One big story is the clash of neighbouring cultures and dominating cultures. One wonders if the Digital re-Discovery of Culture can bridge cultures in conflict? One wonders if DrDC games can help significantly in this?

The Mural stories reflect an understanding of History in becoming. Each side in a conflict has its own History. It is not surprising therefore that the teaching of History is often the subject of reform where neighbouring cultures are in conflict.

"There was no question that history teaching should be challenging, provoking and questioning, which is better achieved when controversial issues are included in the history curriculum, but, in the divided society of Northern Ireland, the problem of raising controversial issues lay mainly with adults. Indeed, in a divided society, where violence, death and destruction are common, where the wall murals, with their colour, language and slogans, define a territory and tell people who they are, myths become part of the identity of a person. Some studies show that, nearly 20 years after the introduction of new teaching methods, there has been no change in people's minds, mainly because the events have not supported history teaching and violence is in the streets everywhere, and each side sees itself as a victim." Keynote presentation on "Teaching materials: controversial and sensitive issues, multiperspectivity" by Ms Vivien KELLY, Northern Ireland in [4].

2. How to Read an Image

"Очевидно стана, че турците, като забележили какво иностранецъ седи на отсрещната имъ страна, се погрижиха да избератъ по-снаженъ и по-бодъръ войникъ за поста, предъ който щяхме да заминемъ. Г. О'Махони фотографира двамата часови, разбира се съ позволението на мюлязимина, обаче съ условие да не се излагатъ на публични места. За да бъдемъ верни на обещанието си, що дадохме и да освободимъ отъ всяка отговорностъ верноподания служителъ, азъ пропускамъ тези снимки." Борис Мандушев (1905) в [28].

"Evidently the Turks, having noticed a foreigner on the other bank decided to choose a strapping and fresh sentry at the checkpoint which we would be passing by. Mr. O'Mahony took photographs of the two sentries, of course with the permission of the *mjulyazim*, however on condition that they would not be shown in public places. In keeping with the promise, as no permission was given by the true subject of the Sultan, I have not used these photographs." Boris Mandushev in [28].

Note: The two texts above are quoted verbatim, the now obsolete character (with cross-bar) being replaced by e or π . (For further information on Mr. O'Mahony see the page by Séamus Shortall [27] and also the Irish Politics Wiki information [24].

The short passage quoted above is taken out of context. There is no indication in this passage that the event takes place at a bridge in Rila. Knowing just this extra piece of information tells us already that there is a border of Bulgaria at Rila at the date in question. There is also the name (of an Irish man): "O'Mahony." This is sufficient to point in the direction of the full context. The origin of the quoted text is given: Борис Мандушев (1905). Googling Борис Мандушев reveals a link: http://www.diplomatic-bg.com/c2/content/view/201/47/

hat is it that one can do or learn in a country and culture that is different from one's own and that can not be done by electronic means such as television, radio, e-mail, the World-Wide Web, etc.? Put differently, what is the relationship between the principle of physicality of soul [12] and electronic media? For us the image is primary. And for our times the primary image is the digital photograph (DigiFoto, ДиджиФото). (Notice that we deliberately exclude "moving images" such as film and television from our account). The DigiFoto has at least two distinct existences, a primary one which we call the Image of Light. The related but secondary existence is the Image of Ink. It is the latter that corresponds most closely with the classical idea of a photograph as print. The DigiFoto qua Image of light corresponds to the older notion of a (35mm) slide.

The point of the story about Mr. O'Mahony reported in 1905 is precisely that of the need for permission to take photographs of the two sentries and who it was that gave permission and who it ultimately was who did not give permission. One wonders about the soldiers in Groman's photograph above (Figure 2). Was permission asked for? Was permission given and by whom?

3. Digitized Manuscripts

"SEANCHAI:

Somewhere on a hill
Once called TSAREVETS
In a neighbourhood
Once known as Veliko Turnovo
There are the ruins
Of what would appear to be a church
Of very strange type.

There is an old story
Dating from the AGE of COMPUTERS
Long, long ago
About the discovery of a great MANUSCRIPT
"Seanfhocail Mhíchíl"
And its digitization
And its distribution
To the WHOLE WIDE WORLD.
It is believed that the original was buried
On the hill.
Thanks to the oral tradition
Preserved by humans
Some sayings of "Seanfhocail Mhíchíl"
Also known as "Old Words of Mícheál"
Are in circulation in the vernacular today:

CHORUS:

Use your eyes, look and see.
Use your heart, feel and love.
Use your mind, think and reason.
Use your soul, be at one. "[9]

This brief quotation from the play "Seanfhocail Mhíchíl" highlights the ever present possibility that all digital artifacts will become unreadable over time. In such an eventuality one might hope that the original manuscript is preserved and accessible. Our present concern here is to explore the "physicality of soul" of the digitized manuscript.

In the opening of his book, The White Castle, Orhan Pamuk (Pamuk 1979, p.1) [10, 1] arranges his narrator Faruk *Darvinoglu* to give one view of the purpose of manuscript: "I found this manuscript in 1982... I wanted to concentrate on the story for its own sake, rather than on the manuscript's scientific, cultural, anthropological, or 'historical' value." Does it not seem to you that *Faruk Darvinoglu* does not care very much for "Cultural Heritage" as such? What would his opinion be of the Digital re-

Discovery of Culture? Would he not be interested in the digitized thing, whatever it might be, qua thing?

Compare this story of Faruk Darvinoglu with the story of the Book of Kells. Today the Book of Kells is admired for the story of its writers and illuminators, not usually for the story it purports to tell, the "Good News" of the Christian Gospels. (The Mural Image (Figure 1) is in a region of the "Island of Ireland" nominally Christian of differing persuasions.) Consider for example the image of the "green monk" (Figure 4) on folio 241 recto which is included in [12].



Figure 4 The Green Monk

Is this not a "self-portrait" of the illuminator? And who is the man (is it the "green monk"?) with the horse on folio 255 verso (Figure 5)?

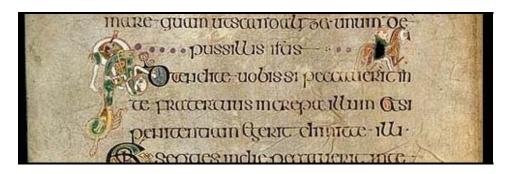


Figure 5 Man and horse? Monk and horse? Why?

Are not these kinds of questions the exact opposite to those of *Faruk Darvinoglu*? I look at this fragment and I see the man or men who wrote, designed, thought, felt... I feel that I belong to the way they sensed their world. This is (my) Physicality of Soul. But I am an Irish man. Will any man feel the same? Will a woman (of whatever cultural background) experience the same? And if not, what is the nature of their experience? Whatever it is, let us agree to call it Physicality of Soul also? In other words the artefact triggers soul-experience which is felt in body, necessarily. In particular, some Physicality of Soul experiences may be extremely negative.

et us imagine you have seen the digitized copy (CD) of the Book of Kells. Then to see the original Book of Kells and experience something of the usual Physicality of Soul one must travel to Trinity College, Dublin, Ireland, where you will be very welcomed. For some, the experience of seeing the original, is disappointing, like that of seeing the much acclaimed Mona Lisa in the Louvre, Paris.

Alternatively, and although not the same quality of experience, one might be fortunate enough to have access to one of the many facsimile copies of the Book of Kells. Being a facsimile, you can touch it. Touching is very physical.

4. Digital re-Discovery of Culture Game on the subject of Ohrid

"The novel I am currently reading (Birds without Wings, by Louis de Bernieres. Secker & Warburg, 2004) has a passage that reminded me of the soul-body relationship that you mentioned in Bansko. I just wanted to share the following words that were uttered by one of the characters in the novel, an old woman named Drosoula.

"I am an old woman now. I am old and useless. I've pondered these things all my life. My flesh is not what it was, and neither are my bones. When I was young my soul seemed to be the same thing as my body. There didn't seem to be any difference, I remember that. When I needed to climb some steps, my legs just climbed, and that was all there was to it. My mind and my muscles were all one. Now when I want to climb some steps I look down at my feet and say, 'Move, in the name of saint Gerasimos, move!' and slowly they move, and then I stop to draw breath, and my lungs feel hard and dry, and I feel my heart fluttering in vain like the last poor starving butterfly, and this is how I have come to know in my own way that there is a soul who is not the body, but lives inside it." (pp. 24-25). Yaşar Tonta in an e-Note to the author, 2004-09-21.

The practical sense of Physicality of Soul is currently being explored in a collaborative research project within the Marie Curie Transfer of Knowledge project KT-DigiCULT-BG which commenced in May 2004. The relevant key component of the project is "Edutainment" and the principal researchers are the author and Ms. Kalina Sotirova, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences.

The vehicle by which the research is conducted is the Digital re-Discovery of Culture Game. This has been under development since July 2004 and the first results have been published [7]. The game is designed to exhibit/elicit the experience of Physicality of Soul.

The original goal was that the DrDC Ohrid game was to be played by anyone intending to visit Ohrid 11th–14th September 2005 for "The First South-Eastern European Digitization Initiative (SEEDI) Conference, DIGITAL (re-)DISCOVERY of CULTURE (PHYSICALITY OF SOUL), — Playing. Digital —." An outline of the design method for the game was posted at [17]

The target culture of the game was intended to be Macedonian, with a specific focus on the location: Ohrid and its surroundings. The original idea was that to experience Physicality of Soul the player needed to be able to get to objects of the game in the places indicated in the game. The game sought also to be able to surprise those who are Macedonian and even those who come from Ohrid itself. So much for the original idea.

In the first stage of the design it was necessary to collect some important Web pages which deal with Macedonia and Ohrid. Let us begin with some "official" WWW locations:

- Macedonia http://www.ohrid.com.mk/angliska%20verzija/Macedonia.htm [21]
- Macedonia, Ohrid

http://www.ohrid.com.mk/angliska%20verzija/City%20of%20Ohrid.htm [30]

- Macedonia, Ohrid, Cultural and Historical Heritage and Treasures of Art http://www.ohrid.com.mk/angliska%20verzija/treasures%20of%20art.htm [39]
- Macedonia, Ohrid, Hotel Inex Gorica http://www.inexgorica.com/index_eng.htm [33]. This was to be the Hotel at which the conference was to be held. In reality, the conference venue was subsequently shifted to the Hotel Granit http://www.southtravels.com/europe/macedonia/hotelgranitohrid/ [32].

and add in some others obtained by googling:

- Macedonia, Ohrid, Heritage Trails http://www.culture.org.mk/ePROEKTI.HTM [31]
- Lychnidos http://www.soros.org.mk/konkurs/076/angver/lihnid.html [34]
- City of Light

http://www.balkanalysis.com/modules.php?name=News&file=article&sid=376 [37]

- St. Clement of Ohrid http://www.mymacedonia.net/language/clement.htm [38]
- Macedonian Culture and Information Centre http://www.macedonia.co.uk/mcic/index.asp [35]

Some questions we asked ourselves while designing the game:

Where does the name Ohrid come from? What does it mean? Variants are Ochrida, Okhrida, and Achrida. Can we design a DrDC game that is playable by each participant irrespective of their (ir)religious background?

From all this research, the idea of Ohrid being a City of Light seemed to be intriguing. And for the candidate Keyword/Keyphrase we chose **Lychnidos**. Now, in doing so, we realized that the Greek nature of the keyword might prove to be controversial given the current political situation with respect to the very name of the country in which Ohrid is situated. Here then is the formal outline of the DrDC game that was proposed. (The outline is due originally to Kalina Sotirova).

The DrDC game has five elements: a backstory, some URLs of WWW pages, some images, a statement of the goal, and a keyword to help direct the play.

1. Backstory: [14]

I was in БЕЛГРАД in June 2004 to present my paper "The graven image—digitized and philosophized." A friend of mine, Romana Ribic, from the Summer School on the Digital Preservation of Medieval Manuscripts, Sofia, Bulgaria,1999, said hello and gave me as a present, a book "The Bridge on the Drina" by a Nobel Prize winner, of whom I had never heard, Ivo Andric. I was very surprised that Ivo Andric had been to Ohrid and described his experience of the lake in a text:

"If you bathing in Lake Ohrid on a sunny day and suddenly emerge from its depths, breaking the surface for a moment, you will see on the pale blue expanse all around you silvery, transparent bubbles, big and small. In each of them the Sun is doubly reflected, like two focuses of different sizes. Approaching one of the bigger bubbles, holding your breath for fear it may burst, you can see in it, as in a distorting mirror, the reflection of your face, wet and laughing. And all the time, that bigger sun, like a vast star, hangs over your head. It all lasts for just an instant, like all beauty, yet it is repeated over and over again..." IVO ANDRIC, Nobel Laureate (excerpt from travelogue "Beside Luminous Lake Ohrid")

These bubbles big and small are just like virtual pearls.

2. URLs of Web Pages:

http://www.ohrid.com.mk/angliska%20verzija/City%20of%20Ohrid.htm

3. Images:



Figure 6

4. Goal: Why is Ohrid called the City of Light?

5. Keyword: Lychnidos.

Commentary: The backstory (i.e., the background story) is a personal perspective from the designer/challenger of the game. It is a carefully constructed text to explain why the playing of the game has particular cultural meaning, at least for the designer. Since the game is played on the WWW there must be a starting point. The URL of at least one Web page must be given. The one chosen for this game gives the quotation of Ivo Andrić concerning the bubbles. It might also be helpful to give an image of two that might suggest a particular perspective on the direction of gameplay. The image I have chosen for this version of the game (Figure 6) is deliberately untitled. Perhaps a player will recognize it to be the picture of an oil lamp? It sends a strong signal for a particular end-goal of the game. Indeed, once such an image is given, it will be hard for the player to ignore. The goal of this particular game is to find an answer to the question "Why is Ohrid called the City of Light?" Such as answer can be found quite quickly. The purpose of the fifth and final element, the keyword, is to facilitate early psychological closure for the player. Such closure is a first step towards experiencing physicality of soul.

A game solution is revealed in the next section. Before proceeding the reader is strongly recommended to attempt to play the DrDC Ohrid game as outlined above. It should only take a few hours to achieve some sort of psychological closure.



Figure 7

5. A Scientific Experiment

To design a game requires prototyping of the game. In this case, I was aware of the Greek linguistic connection between Lychnidos (the given Keyword) and the Goal to explain why Ohrid is called the City of Light. It seemed, therefore, that the Game would have a trivial outcome. I might also have chosen a different Latin form for the Keyword: Lihnidos. In either case, the player would surely arrive at some sort of understanding why Ohrid is called the "City of Light"?

But there was a big surprise. In particular, I knew enough classical Greek to search in our own Standard Greek-English Lexicon [8]:

"I first looked up LIDDEL AND SCOTT's GREEK-ENGLISH LEXICON (wiki http://en.wikipedia.org/wiki/LSJ) and discovered that the key root word of importance was $\Lambda Y'NO\Sigma$, \dot{o} --- a portable light, a lamp, carried in the hand, or set on a lamp stand.

Then I noticed the Greek word $\lambda \nu \chi \nu i \varsigma$, $i\delta \circ \varsigma$, $ideta (\lambda i \chi \nu \circ \varsigma)$ --- lychnis, a plant with a scarlet flower, Anth. II. a precious stone that emits light, prob. the ruby, Luc. Now this is very exciting. It would appear that Lychnidos really means

"of the portable light" or

"of the plant with a scarlet flower" or

"of the precious stone that emits (red) light". "[13]

Exploring the idea of the "portable light" suggested journey to the underworld, perhaps by Orpheus. The connection with a plant seemed unrelated except for the

emphasis on redness. The same was true for the precious stone. Could Ohrid exhibit all these senses of Lychnis?

A collaborator, Michael Emmanuel O'Rahilly, was responsible for tracking down the fact that Theophrastus gave the name Lynchnis to a plant (Theophrastos was a student of Aristotle). [18] What turned out to be the clue for our own solution to the game was the statement that "The name Lychnis was used by Theophrastus and originates from the Greek word 'lychnos' meaning a lamp. This alludes either to the bright red flowers of some species or the use of the woolly-leaved species as wicks in lamps." *Here was a testable scientific hypothesis*.

From all the information obtained as a result of designing the DrDC Ohrid game, Michael Emmanuel O'Rahilly and I discussed how one might go about reconstructing an oil-lamp such as might have been used in LYCHNIDOS over 2000 years ago. I carried out a simple experiment and I present the results here.

First let us take a look at a digiFoto of the burning lamp (Figure 8) taken at 10.30 approximately GMT (Summer Time in Ireland). The oil used is olive oil (from Italy); in the oil is a fresh green leaf plucked from the plant LYCHNIS coronaria in our garden. The leaf was first soaked in olive oil and then lit. It burned brightly for 30 minutes and all of the oil in the lamp was burnt! It was such a wonderful IZNENADA!



Figure 8 Homemade Lychnos (digiFoto: Mícheál Mac an Airchinnigh, 2005-08-31)

I also noticed that the actual shape of the LYCHNIS leaf (plant shown in the background) might be very important for the design of LYCHNOS. Here is a typical fresh green leaf taken from the base of a very healthy plant. My left hand shown (adult) gives some indication of size (Figure 9).



Figure 9 Lychnis Coronaria (digiFoto: Mícheál Mac an Airchinnigh, 2005-08-31)



Figure 10 The shape of the wick (digiFoto: Mícheál Mac an Airchinnigh, 2005-08-31)

Finally, for the record, a collage of the experimental equipment and the DigiFotos:



Figure 11 Collage of the Experimental Equipment bottom right and two digifotos. (digiFoto: Mícheál Mac an Airchinnigh, 2005-09-01)

The design of the experiment took about 2 hours. The equipment was ad-hoc to-hand. The table (Figure 11) upon which it was conducted in a living room in the house, is covered with a sheet of plate glass. I thought about the possibility of it cracking. For the burning I choose a tiny ceramic bowl with a blueish rim. Such was the heat generated by the burning leaf, that the tiny bowl cracked at the end of the experiment and had to be thrown out. In anticipation of such a possibility it had been placed in a second larger ceramic bowl with the floral pattern. In the burning, I tilted the tiny bowl in order to compensate for the physical shape of the leaf.

It is hard to put in words the excitement generated by the success of this experiment. It was, I think the very first successful scientific experiment I ever dreamed up and designed and executed all on my own. There were earlier ones, and very dangerous too, for such a young person when I was about 6 or 7 years of age.

Without any doubt I classify this experiment and this experience as a significant Physicality of Soul event. The physicality of the experience correlated unexpectedly with the digital experience of playing a prototypical DrDC game over the WWW. It was a big surprise. It was not just a matter of some sort of intellectual experience. There was that. And a great deal of learning (of Greek and other things). No! It was the physical act of experimenting, that correlated with and arose from the digital work, that provided the key insight to the experience. This subsequently led us to seek out a corresponding Physicality of Soul experience in Ohrid itself by searching for the plant (expecting to find it in abundance). As things turned out, it seemed that we were to be completely unjustified in our anticipation.

What are the real results of the experiment? First, I know that the live green leaves of this evergreen plant (lychnis coronaria) burn in oil like a wick and give heat and light. The plant is evergreen, a necessary factor for light and heat all year round, obvious though it might seem.

Subsequently when reading "Birds without Wings" [3] by Louis de Bernières I was pleasantly suprised to read on page 9: "... and I passed the window of the Christian schoolmaster, Leonidas Efendi, who was writing furiously [in 1900 CE] by the stinking light of a wick floating in a bowl of olive oil. This teacher was a bad character, stirring

up trouble." And later at page 11: "... had no time for stoop-shouldered opinionated bookworms who did not even know how to harvest an apple." [16]

6. From Theory to Practice in Ohrid

Everything was ready for visiting Ohrid in September 2005. In order to test our hypotheses concerning the DrDC Ohrid game, a complete description was printed and published in the Journal **Нека си представим** (Let us imagine) [20] and distributed to participants at the First SEEDI Conference [26].

Personally, I sought out the plant Lychnis in Ohrid and its surroundings, expecting to find it plentiful and growing wild. The season (Autumn) was wrong for identification by scarlet red flower. Still, I expected to see the characteristic colour and feel of leaf. I was greatly disappointed. It seemed that after all, modern Ohrid (Lychnidos), did not have an abundance of the Lychnis plant. Was this to become another negative physicality of soul experience for the game designer.

Then unexpectedly, Physicality of Soul outcome was achieved [15]. A Lychnis-like leaf was discovered (Figure 12).



Figure 12 Lychnis(?) found in Ohrid, September 2005 (digiFoto: Mícheál Mac an Airchinnigh, 2005-09-15)

This is discovered late in the evening of the 15th of September. Where? In the garden of a famous Church of Sveti Jovan at Kaneo, Ohrid (Figure 13).

Finally, it ought to be noted that much time was also expended testing the alternative hypothesis that Ohrid contained red stone that emitted light (lychnis). Indeed, red stone is abundant in Ohrid and its surroundings. Of all the digiFotos taken I present that one (Figure 14) of the strange lonely red stone found in the Tsar Samuil Fortress. Other details of the DrDC Ohrid game and physicality of soul is available at www.drdc.ie.



Figure 13 Church of Sveti Jovan, Ohrid (digiFoto: Mícheál Mac an Airchinnigh, 2005-09-15)



Figure 14 the other meaning of lychnis is precious red stone that omits light (digiFoto: Mícheál Mac an Airchinnigh, 2005-09-14)

Acknowledgements

Both Yaşar Tonta and Kalina Sotirova were especially helpful in the development of the concept of physicality of soul. Kalina Sotirova and Michael Emmanuel O'Rahilly contributed substantially to the DrDC game on Ohrid. It was Michael who tracked Lychnis to Theophrastus.

References

- [1] Bourdieu, P. (1990). *The logic of practice* (R. Nice, Trans.). Stanford, Calif.: Stanford University Press.
- [2] Clarke, G. (1997). *The photograph*. Oxford: Oxford University Press.
- [3] de Bernières, L. (2004). Birds without Wings. New York: Alfred A. Knopf.

- [4] de Bivar Black, M. L. (2001 (Retrieved February 3, 2006).). Regional Teacher Training Seminar on "Teaching materials: controversial and sensitive issues, multiperspectivity". *Council of Europe, Reform of History Teaching* Retrieved February 3, 2006, from http://www.coe.int/T/E/Cultural_Co-operation/education/History_Teaching/Reform_of_History_Teaching/South_East_Europe/d.Ohrid%20bivar%20black.asp
- [5] de Rynck, P. (2004). *How to Read a Painting. Decoding, Undertanding and Enjoying the Old Masters.* London: Thames & Hudson.
- [6] Fidanoski, B. (2002 (Retrieved February 19, 2006).). St, Georgi (George) Monastery in Kurbinovo, Prespa, Macedonia. Retrieved February 19, 2006, from http://www.dentist-mk.com/Macedonia/Kurbinovo/
- [7] Gormley, S. (2005). *DRDC: A digital discovery/re-discovery of culture and the Semantic Web*. Dublin: Department of Computer Science, University of Dublin, Trinity College Dublin.
- [8] Liddell, H. G., & Scott, R. (1987). An intermediate Greek-English lexicon: founded upon the seventh edition of Liddell and Scott's Greek-English lexicon. Oxford: Clarendon Press.
- [9] Mac an Airchinnigh, M. (1999 (Retrieved February 3, 2006).). The text of a play: Seanfhocail Mhíchíl. Retrieved February 3, 2006
- [10] Mac an Airchinnigh, M. (2004). The Experience at Trinity College Dublin. *International Journal Information Theories & Applications*, 11(3), 211–220.
- [11] Mac an Airchinnigh, M. (2004 (Retrieved April 6, 2005). April 6, 2005). The Practical Sense of Philosophizing: Why preserve anything at all, even digitally? *Review of the National Center for Digitization* Retrieved April 6, 2005, from http://www.komunikacija.org.yu/komunikacija/casopisi/ncd/4/index e
- [12] Mac an Airchinnigh, M. (2005 (Retrieved April 6, 2005). April 6, 2005). The Graven Image Digitized and Philosophized. from http://www.komunikacija.org.yu/komunikacija/casopisi/ncd/6/index_e
- [13] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006), August 12, 2005). Lychnidos googling in Greek. Retrieved February 4, 2006, from http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050812103734/index.html
- [14] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006).). Background Story --- the choice. Retrieved February 4, 2006, from http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050809145537/index.html
- [15] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006).). LYCHNIS found in Ohrid, September 2005? Retrieved February 4, 2006, from http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050925114228/index.html
- [16] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006).). LYCHNOS -- a home-made scientific experiment. Retrieved February 4, 2006, from http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050831120939/index.html
- [17] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006). August 9, 2005). The Design of a DrDC Game for the Ist International SEEDI Conference, Ohrid, Macedonia, 2005. Retrieved February 4, 2006, from

- $\frac{http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050}{809145332/index.html}$
- [18] Mac an Airchinnigh, M. (2005 (Retrieved February 4, 2006).). Theophrastus and the Plants. Retrieved February 4, 2006, from http://homepage.mac.com/micheal1/iblog/B1809453438/C2052660831/E20050828182549/index.html
- [19] Mac an Airchinnigh, M. (2005 (Retrieved February 6, 2006).). SEEDI 2005, Охрид: Keynote PRESENTATION of Mac an Airchinnigh. Retrieved February 6, 2006, from http://homepage.mac.com/micheal1/iblog/B1888672450/C897355819/E20050922073241/index.html
- [20] Mac an Airchinnigh, M. (2005 (Retrieved February 27, 2006).). Нека си представим (Let us imagine). Retrieved February 27, 2006, from http://homepage.mac.com/micheal1/iblog/B1888672450/C1491820654/index.ht ml
- [21] Macedonia, W. P. W. General facts about Macedonia. Retrieved February 4, 2006, from http://www.ohrid.com.mk/angliska%20verzija/Macedonia.htm
- [22] McCormick, J. ((Retrieved February 3, 2006)). Mural Directory. Retrieved February 3, 2006, from http://cain.ulst.ac.uk/mccormick/intro.htm
- [23] Mijajlović, Ž. e. a. (2003). GROMAN'S PHOTO ALBUM 1876-1878. Retrieved February 3, 2006, from http://www.ncd.matf.bg.ac.yu/projects/en/groman.html
- [24] Politics.ie. ((Retrieved February 5, 2006)). Pierce Charles de Lacy O'Mahony. Retrieved February 5, 2006, from http://www.politics.ie/wiki/index.php?title=Pierce Charles de Lacy O%27Mahony
- [25] Rolston, B. (2003). *Drawing Support 3, Murals and Transition in the North of Ireland*. Belfast: BTP Publications Ltd.
- [26] SEEDI. (2005 (Retrieved January 26, 2006).). The First South-Eastern European Digitization Initiative (SEEDI) Conference. Retrieved January 26, 2006, from http://www.ii.edu.mk/SEEDI2005/seedi.htm
- [27] Shortall, S. ((Retrieved February 5, 2006)). Pierce O'Mahony An Irishman in Bulgaria. Retrieved February 5, 2006, from http://www.shortall.info/Mahony/pierce o.htm
- [28] Spassova, M., & Shortall, S. (2002). *Pierce O'Mahony -- an Irishman in Bulgaria*. Sofia: ACSIOR Networking Systems.
- [29] Web_Page_Writer. City of Belgrade Topčider. Retrieved February 18, 2006, from http://www.beograd.org.yu/cms/view.php?id=201846
- [30] Web_Page_Writer. City of Ohrid. Retrieved February 4, 2006, from http://www.ohrid.com.mk/angliska%20verzija/City%20of%20Ohrid.htm
- [31] Web_Page_Writer. "Heritage Trails" Ohrid at your fingertips. Retrieved February 4, 2006, from http://www.culture.org.mk/ePROEKTI.HTM
- [32] Web_Page_Writer. Hotel Granit. Retrieved February 6, 2006, from http://www.southtravels.com/europe/macedonia/hotelgranitohrid/
- [33] Web_Page_Writer. Hotel Inex Gorica. Retrieved February 4, 2006, from http://www.inexgorica.com/index_eng.htm
- [34] Web_Page_Writer. Lihnidos. Retrieved February 4, 2006, from http://www.soros.org.mk/konkurs/076/angver/lihnid.html

- [35] Web_Page_Writer. Macedonian Cultural & Information Centre. Retrieved February 4, 2006, from http://www.macedonia.co.uk/mcic/index.asp
- [36] Web_Page_Writer. Marcel Proust: free web books, online. Retrieved February 19, 2006, from http://etext.library.adelaide.edu.au/p/proust/marcel/
- [37] Web_Page_Writer. Ohrid Through the Ages. Retrieved February 4, 2006, from http://www.balkanalysis.com/modules.php?name=News&file=article&sid=376
- [38] Web_Page_Writer. St. Clement of Ohrid. Retrieved February 4, 2006, from http://www.mymacedonia.net/language/clement.htm
- [39] Web_Page_Writer. Treasures of Arts. Retrieved February 4, 2006, from http://www.ohrid.com.mk/angliska%20verzija/treasures%20of%20art.htm

mmaa@eircom.net mmaa@cs.tcd.ie