

## 1. Stanislava Sevcikova

The aim of the following text is to compare the logotherapy of V. Frankl (year is usually provided after reference to models, theories, tools...) and the cognitive-behavioural therapy and to outline the possibility of its further use in the therapy of drug abuse. To begin with, the author will try to identify in detail the main components of both theories and to present evidence for the implicit statement that the balancing of some weak points of one theory consists in finding the virtues of the alternate theory. Both theories thus could, if applied appropriately, be used in a complementary way, or at least, simultaneously or subsequently.

## 2. Sreenivas Reddy Bathula

The MAGE (melanoma-associated antigen) gene family is huge and is widely spread over different types of species. The importance of these proteins rose because of their high expression in tumor cells, together with their antigen presenting nature. In humans, more than 30 proteins have this domain. In some MAGE family members, the MAGE domain repeats itself/is repeated. However, the exact structure or function of these proteins is not clearly known. Proteins containing MHD show interactions with various important cellular proteins. Expected MAGE domain functions are closely related to cell development, DNA repair and apoptosis. Using 2 liters of  $^{15}\text{N}$  isotopically labeled media, we produced 10 mg/ml MAGE A4 protein (MAGE Homology Domain, 25 kDa), which corresponds to 700ul, 0.56 mM protein sample in 25 mM phosphate buffer in normal saline (136-150 mM NaCl), pH 7.32. When we ran HSQC measurements on a 600 MHz NMR system (equipped with TCI cryoprobehead, 16 scans at 30degC), we obtained the spectra where peaks were well resolved and the number of peaks was close to the expected amount based on the amino acid sequence.

### 3. Veronika Navrkalova

Chronic lymphocytic leukemia (CLL) is characterized by a progressive accumulation of functionally incompetent lymphocytes. Its highly variable clinical course is mostly determined by the combination of two major biological factors: the mutation status of the immunoglobulin heavy-chain variable region (IgVH) and four prominent genomic aberrations, i.e. deletions 11q22-23, 13q14, 17p13 and trizomy of chromosome 12. The impact of gene mutations on CLL progression is less clearer. Recently, several studies have shown a clear association between mutations in TP53 (locus 17p13) or ATM (locus 11q22-23) tumor-suppressor genes and disease progression and chemorefractoriness. The aim of this project was to introduce a fast and reliable resequencing microarray for selected genes, whose alterations may have a negative impact on CLL pathogenesis and/or therapeutic response.

### 4. Zdenka Schormova

Communicative competence in Medical English is an essential part of the specialised training of nursing students on tertiary non-university level. In this paper, the level, self-confidence and attitudes of students towards this subject when entering tertiary education, and the influence of determinants during their studies were compared to the same aspects of communication of foreign patients during their practical training. Likewise, the attitude towards foreign languages was compared to that of teachers of specialised subjects.

A total 160 first-year students were questioned and their English level tested when entering tertiary education, and again during their final year. The attitudes of 50 teachers pertaining to specialized subjects in the same type of schools were also questioned. Interviews were conducted with 10 randomly selected last-year students on detailed aspects of their communicative competence. Although their initial language level is not very high, the majority of students are well aware of the importance of developing a good level of communicative competence for their future profession compared to the opinion of teachers of specialized subjects. The more the language targets their profession, the more motivated they are. Encouragement through high levels of motivation and quality specialized textbooks together with skilled teachers and their carefully devised methods lead to higher levels of self-confidence and regarding communicative competence in Medical English

### 5. Eva Mulickova

Adaptive (or context) cartography aims to create a dynamic user-oriented system, i.e. a system adapted to the context of the user. Context may be defined as any information that can be used to characterize the situation of the user [source?]. Just based on the context information alone, the user gets the right map tailored to his needs. Crisis management is an area that requires a diverse group of professionals to be involved in the handling of emergencies; each professional must have a specific task and background knowledge, thus universal maps are not efficient. To support decision-making and to minimize the time required for map interpretation, the final cartographic product must be adapted to specific users. A fundamental task for the adaptive mapping system design is the selection of factors defining the user's context. This presented paper deals with problems of defining an emergency context; with reference to an example of a flood emergency it analyses systems of flood prevention, response and recovery in the Czech Republic and specifies the main activities of the involved authorities and professionals. Based on the analyses factors of the emergency, context is defined, their value range set and cartography models proposed.

## 6. Petr Jarusek

In this paper, we explore the concept of human problem-solving through the use of a case study for a particular problem – a Sokoban puzzle. For the study, we collected data using the Internet. This facilitated the collection of significantly larger volumes of data (2000 problems solved, 780 hours of problem-solving activity) than in typical studies of human problem solving. Our analysis of collected data focuses on the issue of problem difficulty. We show that there are very large differences in the difficulty of individual Sokoban problems and that these differences are not explained by previous research. To address this gap in understanding we describe an abstract computational model of human problem-solving, a metric of a problem decomposition and formalization of a state space bottleneck, and discuss how these concepts help us to understand human problem-solving activities and differences in problem difficulty.

## 7. Jana Komendova

The present contribution deals with temporary work which is considered to be an atypical form of employment [where? in which country?]. The characteristic feature of temporary work is that it is often arranged through an agency which secures non-permanent employment

for workers and offers temporary posts for them to work for and under the direction of an establishment wanting to make use of their services. These employment agencies play an important role in the labour market, especially in the fight against unemployment. At the same time, the protection of temporary workers has to be guaranteed by legal regulations. The purpose of the contribution is to analyse the International Labour Organisation standards contained in the Private Employment Agencies Convention (C181) ratified by the Czech Republic and the Private Employment Agencies Recommendation (R188) and compare it with European Community Law, in particular with the new Temporary Work Directive [2008/104]. The contribution defines the fundamental principles surrounding the regulation of temporary work in both the aforementioned systems and analyses their implementation into particular institutes such as equal treatment with temporary workers, working conditions, conditions of remuneration, protection of personal data, collective bargaining and social security. A comparison of both systems leads to the conclusion that the standards of the International Labour Organisation are more comprehensive because the scope of application of the Convention 181 and Recommendation R 188 is larger than the scope of application of the Temporary Agency Work Directive that limits working conditions and regulates only certain activities of employment agencies.

8. Zuzana Makovska

The objective of the submitted paper is to describe particular behavioral alteration techniques and the ways in which they are put to use by pupils in the environment of Czech secondary schools (ISCED 2A). At the same, the author proposes to analyze the pupils' perception of the usage of these techniques. [v. clear]

The study is conceived as qualitative research. The data was gathered using unstructured, direct observations of the classrooms which took place during the individual classes (2 taught classes were observed in four classrooms per school) analysis of the collected video recordings, and interviewing of particular pupils. The data collected was processed using [ATLAS.ti](#) 5.6. These data elucidate that pupils rely more on pro-social behavioral techniques (such as honesty-sincerity and utilitarian justice) and on neutral techniques (especially on pleading) rather than on antisocial techniques like emotional displays and blame, which are used to a much lesser extent. Also, it is important to realise that the pupils' selection of any particular technique is influenced by various factors – among them, perhaps the most

important is their perception of the teacher's power, the exact nature of communication in the classroom, and the interaction in the classroom itself.

## 9. Jitka Hanusova

### Aggregation of Geodata for Emergency Management

#### Abstract

Geodata is used to create detailed map creating, but before it can be used for this purpose, it needs some edits. This is because the items displayed on a map must be optimized for a map measure. The cumulative term for the process of optimizing geodata for a map measure is 'cartographic generalization'. Cartographic generalization contains many operations, with aggregation being one of them. The aggregation of a geodata is a process that makes one item for a new map with smaller measurements from a group of items in detailed measure. For example, the result of aggregation of a group of trees from a map with greater measure is one forest symbol in a new map with a smaller measure.

The situation surrounding digital maps is more complicated. Analogue maps have one measure but digital maps allows users to zoom between many measures. So a digital map has to include many special datasets for each measure. Another possibility of how to implement the aggregation of a geodata for a digital map is the use of real time aggregation. Real time aggregation proceeds online during a user's interaction with a map. Therefore a map needs only one dataset. Real time aggregation is especially applicable to web cartography. To find the best method to perform an aggregation of geodata for our digital map is one of the many objectives of our project on Dynamic Geovisualization in the Emergency Management.

## 10. Dagmar Strejckova

#### Abstract No. 1:

The article deals with media education as the theme of RVP ZV (Frame Educational Programme of Primary Education). It is engaged in the intended research of the media education. The research theme is aimed at a comparison of the conception and the realization of media education. The way out of the conception of the media education is to first analyses foreign curriculum documents and to compare these with our versions of the same. The realization of media education will found based on the questionnaire and consequently on the interview with teachers.

Abstract No. 2:

The aim of this article is to stake the authority protecting public interest. Our primary interest surrounded the Office of the Government Representation in Property Affairs and the management of state property. The author was engaged in the activity of this office at large from a valid legal form, with the stress for his specifics. The intention of the author was to survey this office with the Supreme Audit Office and to envisage an intercommunication and cooperation with the possibility of a cavity of this cooperation to the future.

The Office of Government Representation in Property Affairs is relatively a new institution having been introduced into the Czech legal code not long ago, on the 1st of July 2002. The representation of this office is performed by acting for other government constituents at court hearings and similar proceedings concerning proprietary rights of the state, financial claims, business transactions and complaints lodged with the Constitutional Court. These actions take their courses at Czech courts, at court hearings abroad and at international courts hearings. These hearings pertain to ownership, validity of contracts on property transfers and groundless enrichment to the detriment of the state. The author was engaged in investigating the relationship between the Office of Government Representation in Property Affairs and the Supreme Audit Office, describing the possibilities of their cooperation.

The activities could be more effective by integration of these two offices. At the present time we can persuade of the positive move to the audit conclusions. The audited persons seek to avoid the remedy of serious shortcomings.

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A)

Interaction between 3D collagen-based matrices and neural progenitors derived from human embryonic stem cells

The morphological and physiological properties of cells in planar conditions of tissue culture plates are different to its three-dimensional (3D) natural microenvironment *in vivo*. The

complex architecture of an extracellular matrix represents the compact, highly porous form that influences cell growth, differentiation and morphogenesis. A variety of biomaterials was produced to mimic the natural microenvironment but the influence of physico-mechanical properties was not fully understood.

The goal of this project is to provide a complex analysis of the interaction between 3D collagen structures and neural stem cells with respect to differentiation of specific cell types. The main priority is to characterize the relationship between physicomachanical properties of microenvironment and stem cell lineage commitment in conditions with or without the addition of morphogens. It is hoped that these results will lead to the specification of suitable biomaterials in the research of nervous tissues in *in vitro* conditions and to extend possibilities to study both normal and abnormal functions of cells and tissues.

B) 'The System of Local Taxation at Municipal Level: the Case of the Czech Republic and Ukraine'

Abstract

This article is dedicated to the system of local taxation of the municipality. The current system of local taxation in Ukraine is not effective. Hence, a scientifically grounded detailed revision of the fiscal policy at local level is necessary. The main aim of this article is to find possible solutions which will lead to the improvement of the Ukrainian system of local taxation by taking into account the experience of the Czech Republic and other EU countries.

C.1.)

First, we present various possibilities of using corpus in teaching Czech as a foreign language. Later, we aim to focus our attention to two fields of study: 1. We create a set of supposed knowledge of linguistic terminology on the basis of the analysis of selected textbooks of Czech as a foreign language. 2. We compare this created set with the terminology used for the description of morphological tags in the electronic Manual available for every user of the Czech National Corpus. We propose an outline of the information which is necessary to add or change in the description of morphological tags, when it is used by students who draw their knowledge of Czech grammar from the analysed textbooks.

C.2.)



The aim of this paper is to point out the use of the Czech National Corpora (CNC) for teaching Czech. It presents the results of a survey among students (native and non-native speakers) focused on DDL method and their feedbacks. None of the authors of the textbooks of Czech for foreigners has yet utilized the data from CNC. The reason for this could be that Czech is a highly inflected language, and so the authors need to simplify the sentences as far as possible. However, using CNC appears to be a very practical way to practise the understanding of the text without the knowledge of whole declination. Corpora could be the best dictionary for Czech students because therein they can find the lemma, which is often different to the word.

In our survey, we concentrated to doublets and variants in Czech declination and conjugation. Our DDL questions include these assignments: 1. find the frequency and see which ending is more common, 2. find which variant is connected with which preposition, 3. check the collocations and see what is the semantic difference between the variants, 4. check these variants in all parts of CNC and establish which variant is used most often in written Czech or spoken Czech.

In conclusion, we would like to compare the feedbacks from native speakers (who know the language but need to invent the rules) and non-native speakers (who need to know what are the rules are and how to use them in practise) and say if this method is also practical and motivational for non-native speakers as well.

Both abstracts are in plural because there are two authors.