

1. Michal Ďuriník

How much will you pay to have it repaired?

Anchoring effect in willingness to pay for a product repair.

Exposing a person to certain numerical values (an anchor) shortly before they are asked to decide, has previously been shown to influence people's willingness-to-pay decisions. This paper investigates the anchoring effect on the willingness of subjects to pay for product repairs. To compare three different anchoring strategies, an experiment with 128 participants has been conducted. Additionally, this paper investigates the relationship between anchoring and subject's Need for Cognition score. The importance of these findings for upcoming research and business practice is then discussed in the conclusion.

Keywords: anchoring, experiment, willingness to pay, product repair, need for cognition

2. Nela

Ventral and dorsal visual pathways in elderly patients(?) with Alzheimer's disease: An fMRI study

Alzheimer's Disease (AD) is the most common type of dementia. AD patients gradually lose cognitive capacity, which may result in deficits in attention, executive ability, learning and memory, language, visuospatial ability, praxis and social cognition. Impairments in visual processing may be detected during the initial stages of AD. The aim of the study is to investigate how the ventral and dorsal visual pathways were affected in the elderly patient with AD and healthy control subjects. 12 patients with AD and 12 age-matched healthy control subjects were also included. All participants were examined using standardised neuropsychological tests. The subjects underwent an examination in a 1.5T MR imager to investigate changes in the parieto-occipital cortex (dorsal pathway) and in the temporo-occipital cortex (ventral pathway). The subjects performed a visual task in the MR imager: this was an object identity task and an object orientation task. The data were analysed using Statistical Parametric Mapping 8. A region in the dorsal pathway showed a selective increase in activity with changes in object orientation. AD patients tend to have increased activation in the dorsal visual pathway compared with age-matched healthy control subjects during an object orientation task. Significant activation peaks in the left hemisphere were located in the superior temporal gyri ($z = 5.1$) and precuneus ($z = 3.5$). In the right hemisphere, peaks were located in the precentral ($z = 4.4$) and postcentral ($z = 4.4$) gyri. The findings of this study support the idea that the dorsal visual pathway is more susceptible to AD-related neuropathologic changes than is the ventral visual pathway.

Keywords: Ventral visual pathway; dorsal visual pathway; Alzheimer's disease; fMRI.

3. Linda

Sequencing-based molecular typing of *Treponema pallidum* strains in the Czech Republic

Syphilis, caused by *Treponema pallidum* ssp. *pallidum*, is a sexually transmitted multistage disease with a diagnosis based on clinical symptoms, serological findings and other methods such as direct detection of treponemes by dark field microscopy. In the 1990s, PCR-based methods for direct detection of treponemal DNA were developed. Recently, a sequencing-based molecular typing scheme, based on the sequencing of the TP0136, TP0548 and 23S rRNA genes, was introduced. Genetically characterized syphilis strains can be clearly divided into two groups, Nichols-like strains and SS14-like strains.

A set of 182 clinical samples isolated from 170 patients suspected of having syphilis, collected in the Czech Republic between 2012 and 2013, was tested for the presence of treponemal DNA. In each sample, PCR tests for *poIA* (TP0105), *tmpC* (TP0319), TP0136, TP0548 and 23S rRNA genes were performed. Molecular typing of treponemal DNA was based on the sequencing of TP0136, TP0548 and 23S rRNA genes. Samples taken from 68 patients were found to be PCR-positive. Treponemal DNA was typeable in samples taken from 50 PCR-positive patients and [or should 'where' be used

here?] 9 different genotypes were found. The proportion of treponemal strains resistant to macrolide antibiotics was 70%. All identified genotypes are related to the sequence of the SS14 like strain, with the exception of 3 samples which were related to the Nichols like strains.

It is believed that more than 12 million syphilis infections occur on a global scale each year. Molecular detection of treponemal DNA and the subsequent molecular typing of *T. pallidum* strains are important improvements in syphilis diagnostics for a number of reasons, including epidemic characterization and control, association of particular strain genotypes with neurosyphilis, resistance to macrolide antibiotics, and discrimination between re-infection and treatment failure.

4. Anna

Field research on inter-confessional co-existence: The limits of a qualitative approach to the study of religion within one locality

The paper deals with the issue of research on inter-confessional co-existence and considers the limits of the use of qualitative approaches to the study of religion. The paper builds on particular field research which was conducted among believers of three different denominations; the Roman Catholic Church, the Czechoslovak Hussite Church and Jehovah's Witnesses, all of whom co-exist in the area of one village.

Firstly, attention is devoted to a general outline of the research itself including the area of interest and the criteria for the selection of a locality. Then the results of field work are then summarized to illustrate the religious atmosphere in the selected locality - relations between religious and non-religious people and their impact on life in the community. In addition, this paper discusses the methodological instruments used during the research; namely: the semi-structured interview, oral history and data analysis. It then examines the potential obstacles that could have been expected or that eventually appeared during the research itself; problems of interpretation and respondents' anonymity, clear formulation of religious denomination, the confrontational character of the studied phenomenon, the position of researcher, etc. Finally, this paper points to possible solutions to these obstacles and summarizes the advantages, such as direct contact with focused issue and involved people in its authentic environment, and disadvantages (mentioned above) of using qualitative methods. However, this does not mean that the researchers should avoid these methods, on the other hand they should be prepared for the potential difficulties and be able to work with them.

5. Tomáš

Role of Treatment in the Appearance and Selection of BCR-ABL1 Kinase Domain Mutations

Abstract

Background and Objective: The availability of different tyrosine kinase inhibitors (TKIs) with distinct antileukemic potency enables the optimization of current therapeutic regimens; however, some patients lose their ability to respond to therapy as they acquire TKI resistance. In this study, we describe a single-center experience of monitoring BCR-ABL1 kinase domain (KD) mutations and discuss the impact of treatment on mutation selection.

Methods: Chronic myelogenous leukemia (CML) patients treated with TKIs at the Department of Internal Medicine – Hematology and Oncology, Masaryk University and University Hospital Brno during 2003–2011 were included in this study. A total number of 100 patients who did not achieve an optimal therapy response or who lost their therapy response were screened for the presence of BCR-ABL1 KD mutations, using direct sequencing.

Results: Our data show that pretreatment with non-specific non-TKI drugs prior to TKI therapy does not preferentially select for initial BCR-ABL1 KD mutations, in contrast to first-line imatinib therapy, which shows a clear predominance of T315I or P-loop mutations compared with mutations located in other KD regions. In addition, the median time for the detection of P-loop mutations was substantially shorter in patients treated with first-line imatinib than in those pretreated with non-TKI drugs. Furthermore, analysis of CML patients who had recurrent resistance to TKI therapy revealed possible therapy-driven selection of BCR-ABL1 KD mutations. Finally, we confirm the previously described poor prognosis of CML patients with mutations in the BCR-ABL1 KD, since 40.0% of our CML patients who harbored a BCR-ABL1 KD mutation died from CML while receiving TKI treatment. Moreover, among the patients who are still on treatment, 27.8% have already progressed. Our data also confirm the unique position of the T315I mutation with respect to its strong resistance to currently approved TKIs.

Conclusion: On the basis of the ‘real-life’ data described in this study, it is possible to conclude that the therapy itself results in its failure and selects the most resistant mutations under the selective pressure of the applied therapy regimen in some CML patients who harbor BCR-ABL1 KD mutations.

6. Daniil

USB flash drives are used for data storage. Encryption techniques are usually used to protect data on USB flash drives. I describe attack models on 3 most common protection methods: data storage with software encryption, hardware encryption, and with firmware updating. All of these protection methods have visible conditions that enable an attacker to clearly understand the expediency of the attack. USB flash secure sticks or encrypted files can give an attacker to understand that the secret data is stored. I propose a secure data storage method for USB flash drives that excludes visible conditions to perform attacks. This method is based on capability to mask USB flash drive to drive with smaller memory capacity thereby forming two memory spaces: visible and invisible. Restricting attacker's access to only the visible part of memory space, my method will prevent unauthorized access to stored data.

7. Simona

Abstract

Background: The prognosis of patients with ST elevation myocardial infarction (STEMI) depends on several factors included in previous validated scoring models. The aim of this study was to compare prognostic accuracy of 6 scoring models till 3 years in cohort of STEMI patients treated with primary percutaneous coronary intervention (PCI).

Methods: Individual patient data on 593 patients with STEMI treated with PCI were collected. In this cohort, we examined and compare the ability of prognostic scores (Cadillac, GRACE, PAMI, TIMI,

Dynamic TIMI, Zwolle) to predict three year mortality and rehospitalisation for ADHF. The predictive accuracy of the six score was evaluated by area under curve (AUC) or c-statistics.

Results: The all cause three years mortality was 26.7%, and three years rehospitalisation rate was 28.0%. The prognostic models for mortality have high predictive accuracy; the c-statistics were 0.82 for Cadillac score, 0.86 for GRACE, 0.73 for PAMI, 0.81 for TIMI, 0.77 for Dynamic TIMI and 0.80 for Zwolle. These six scores also performed well for the prediction of cumulative rehospitalization at three years (c-statistic range 0.64 – 0.81).

Conclusion: The risk stratification of patients with STEMI who are undergoing primary percutaneous coronary intervention using the CADILLAC, GRACE, PAMI, TIMI, Dynamic TIMI and Zwolle risk scores provide important prognostic information and enables accurate identification of high-risk patients.

8. Katerina

Nosocomial infections caused by *Pseudomonas aeruginosa* are a serious problem in modern health care. Bacteria is equipped with a large arsenal of cell associated and secreted virulence factors, but the exact relationships among virulence determinants are still not fully elucidated. In the present study, 175 catheter-related isolates were observed regarding the presence of selected virulence factors and the correlations among them was detected. A high percentage of the strains (> 80%) produced extracellular haemolysins, LasB elastase and siderophores, formed submersial and air-liquid interface biofilm and were motile by one or more types of motility. One-fifth of the strains produced AmpC β -lactamase, two strains produced metallo- β -lactamase. The most effective antibiotics were colistin and amikacin. A positive correlation ($p \leq 0.05$; correlation coefficient $\gamma \geq 0.40$) was seen between the production of several degradation enzymes and between both types of biofilm. On the other hand, a negative correlation was found between siderophores production and submersial biofilm. Interestingly, an unexpected positive correlation was detected between siderophores secretion and A-L biofilm production. This was contrary to previous observations that extracellular products secretion is downregulated in (submersial) biofilm and it will be subject of subsequent research.

9. Hana

The concept of nomadism as a queer strategy

The contribution presents the concept of nomadism, as developed by Rosi Braidotti, as a potential queer strategy. Originating in actual nomadism in the sense of geographic migration, Braidotti develops a metaphor which aims to criticize immobility, center and majority. Nomadic subjects blur borders, they are at home everywhere and nowhere, they are not embedded and do not want to be. However, they feel a strong connection and closeness with others. In my contribution, I aim to relate and extend the concept of nomad with elements of queer theory. Like nomads, queer subjects are not necessarily bound to an identity; on the contrary, – they criticize the need for a common identity. Hence, nomadism provides a potential strategy for those who do not fit in the gender or sexual majority, nor do they want to be part of the LGBT community, but feel a connection with their sexuality. This sexuality might not be solid and unchanging, as seen in the concept of sexual orientation, but fluid, which is "at home everywhere, but nowhere."